



Pb Free

RoHS Compliant

Features

- Small and low profile
- Low insertion loss
- High selectivity
- Withstanding high voltage

Applications

- PCS
- GPS

How to Order

SF 14 - 0906 M 4 UU 01
① ② ③ ④ ⑤ ⑥ ⑦

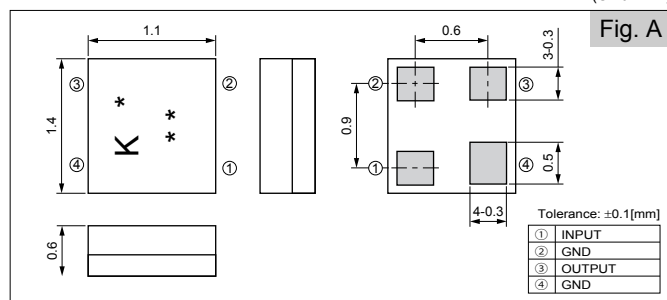
- ① Series
- ② Package Size
- ③ Frequency
- ④ Application
- ⑤ Terminals
- ⑥ Input/Output Condition
- ⑦ Custom Specification

Specifications

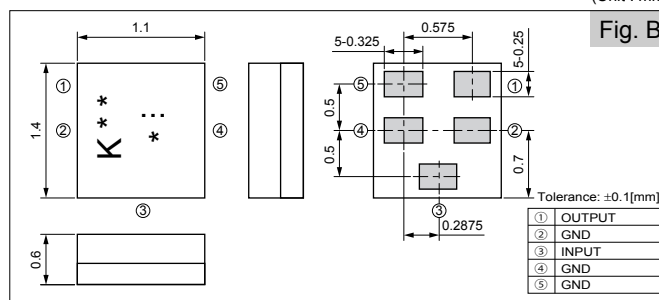
Parts No.	Application		Pass Band Frequency	Pass Band Insertion Loss	Pass Band Variation	Pass Band VSWR	Absolute Rejection						Operating Temperature	Storage Temperature	Dimensions	Test Circuit	Recommended Land Pattern	Recommended Land Pattern
SF14-0906M4UU01	JCDMA	Tx	887MHz 925MHz	3.2dB max.	1.7dB max.	2.2 max.	10MHz 596MHz	720MHz 761MHz	832MHz 870MHz	942MHz 1774MHz	2661MHz 1850MHz	2775MHz	-30 to +85°C	-40 to +85°C	Fig. A	Fig. E	Fig. I	Dimensions 1
SF14-2642M5UU01	DMB	Rx	2629MHz 2656MHz	2.0dB max.	1.0dB max.	1.7 max.	45dB min. 0.3	50dB min.	23dB min.	38dB min.	30dB min.	3447.5MHz	-30 to +85°C	-40 to +85°C	Fig. B	Fig. F	Fig. J	Dimensions 1
SF16-0881M5UB01	Cell	Differential	869MHz 894MHz	3.0dB max.	1.5dB max.	2.5 max.	0MHz 824MHz	824MHz 849MHz	915MHz 960MHz	960MHz 3000MHz			-30 to +85°C	-40 to +85°C	Fig. D	Fig. G	Fig. L	Dimensions 2
SF16-1575F4UU01	GPS	Front End	1573.92MHz 1576.92MHz	1.8dB max.	1.0dB max.	2.0 max.	810MHz 960MHz	1429MHz 1501MHz	1893MHz 2170MHz				-30 to +85°C	-40 to +85°C	Fig. C	Fig. E	Fig. K	Dimensions 2
SF16-1575M4UU01	GPS	Inter Stage	1573.92MHz 1576.92MHz	1.8dB max.	1.0dB max.	2.5 max.	810MHz 960MHz	1208.22MHz 1210MHz	1522.42MHz 1628.42MHz	1850MHz 1910MHz			-30 to +85°C	-40 to +85°C	Fig. C	Fig. E	Fig. K	Dimensions 2
SF16-1960M5UB01	PCS	Differential	1930MHz 1990MHz	4.1dB max.	2.0dB max.	2.5 max.	0MHz 1850MHz	1850MHz 2040MHz	2200MHz 2800MHz	2800MHz 3400MHz	3400MHz 6000MHz		-30 to +85°C	-40 to +85°C	Fig. D	Fig. G	Fig. L	Dimensions 2

Dimensions

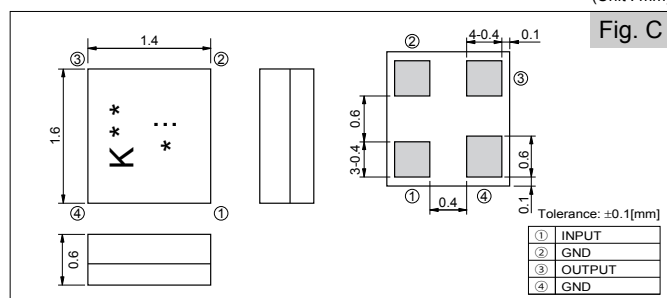
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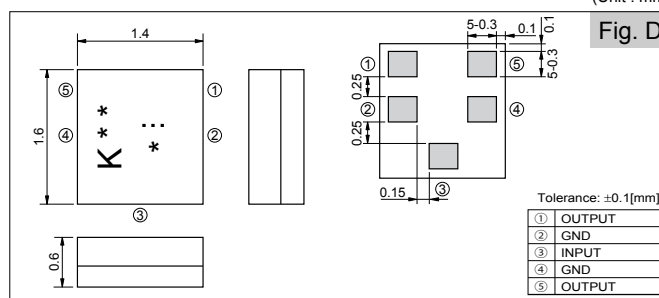
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(Unit : mm)

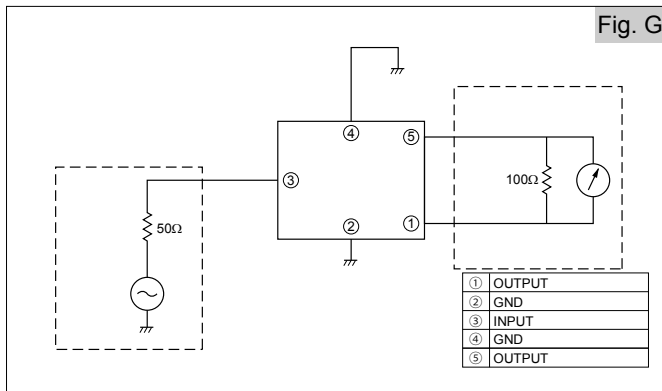
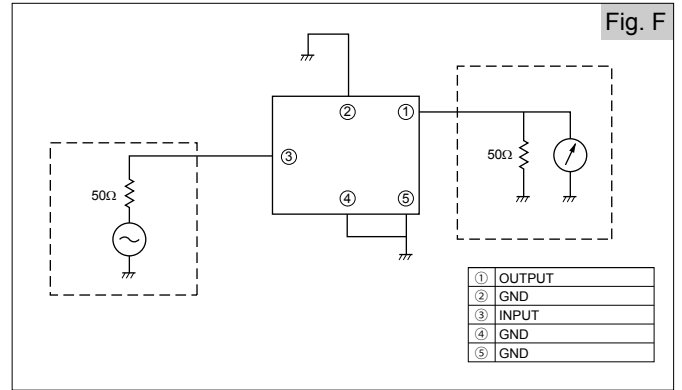
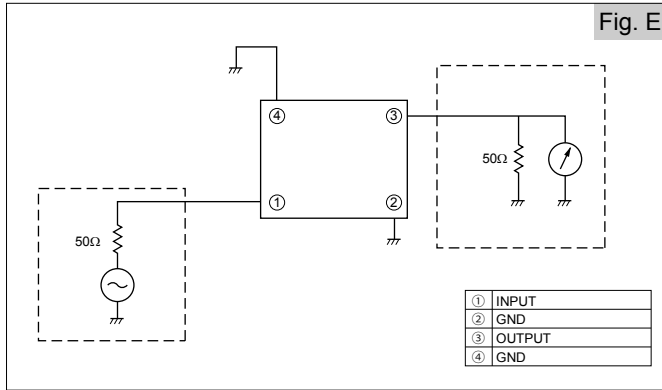


(Unit : mm)



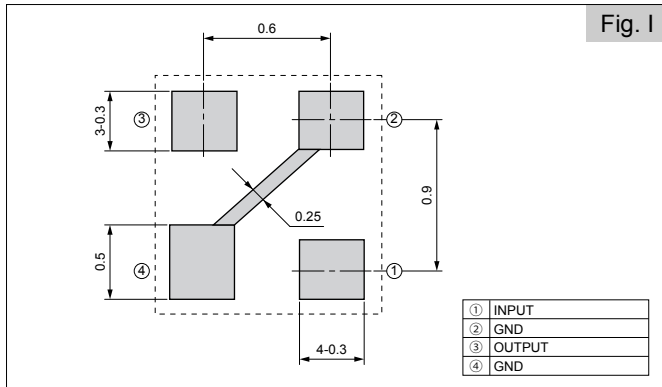


Test Circuit

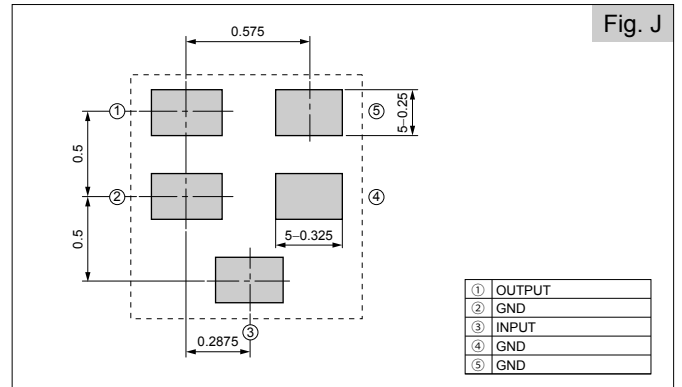


Recommended Land Pattern

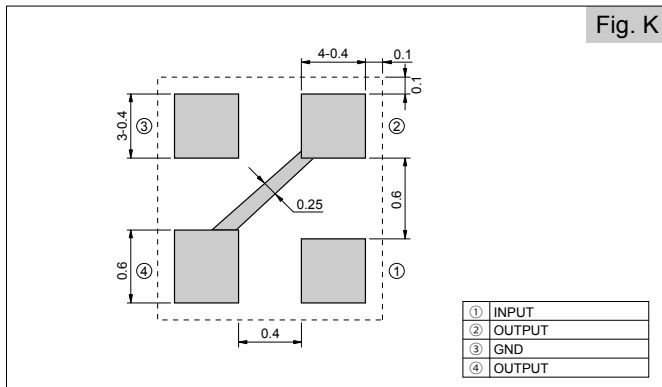
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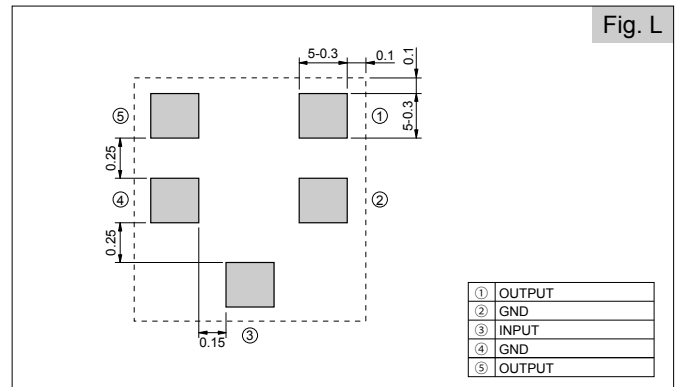
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(Unit : mm)

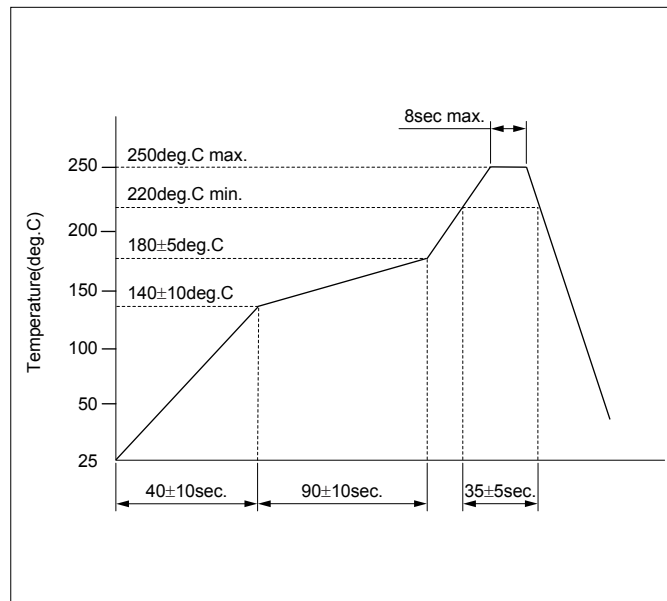


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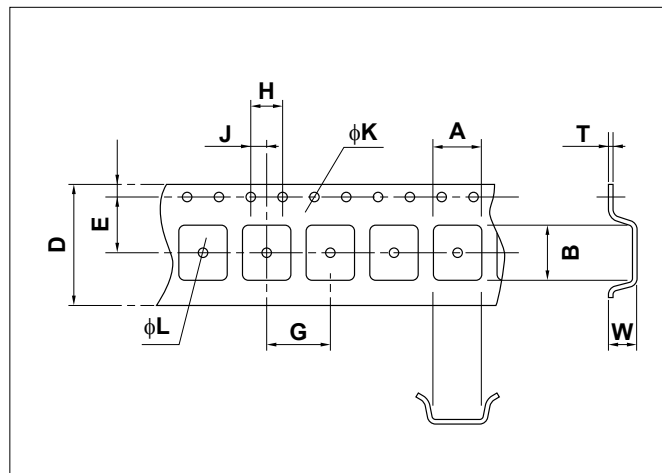


Recommended Temperature Profile IR Reflow



Taping Dimensions

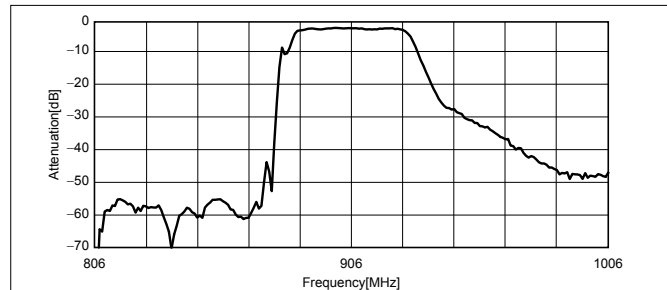
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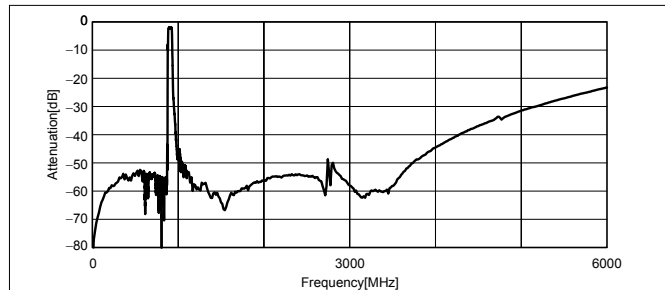
Code	A	B	D	E	G	H	J	K	L	T	W
Dimensions1	1.4	1.7	8.0	3.5	4.0	4.0	2.0	1.50	0.5	0.2	0.8
Dimensions2	1.85	1.9	8.0	3.5	4.0	4.0	2.0	1.50	1.10	0.25	0.95

Characteristics

<JCDMA>Parts No. : SF14-0906M4UU01

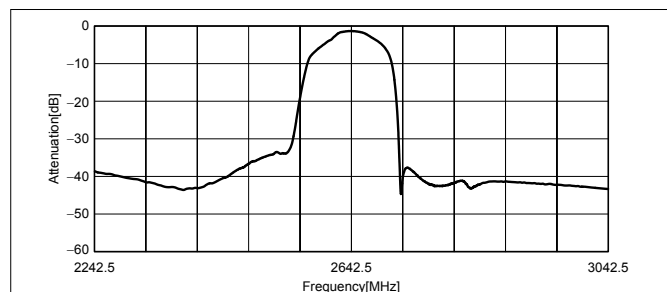


Pass Band Characteristics

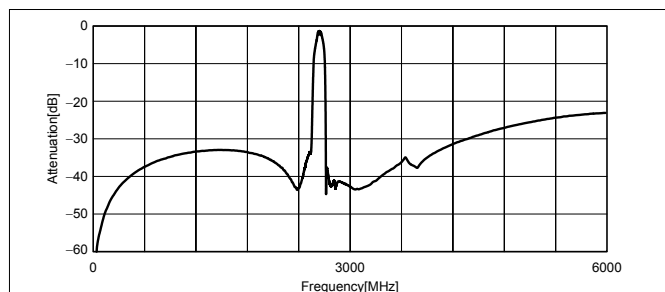


Spurious Characteristics

<DMB>Parts No. : SF14-2642M4UU01



Pass Band Characteristics

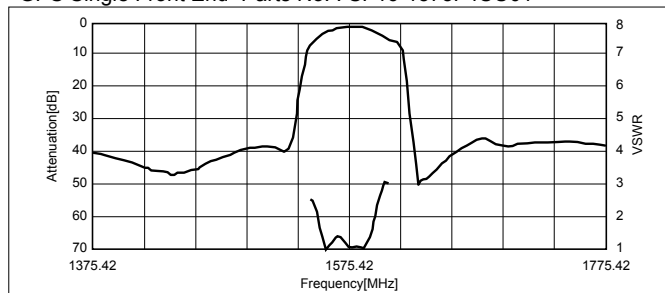


Spurious Characteristics

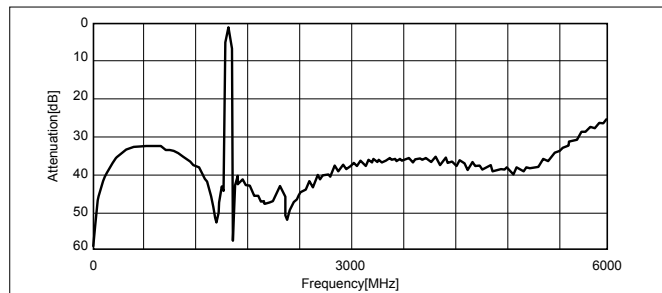


Characteristics

<GPS Single Front End>Parts No. : SF16-1575F4UU01

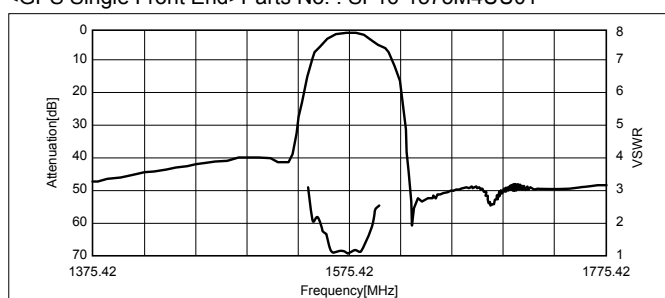


Pass Band Characteristics

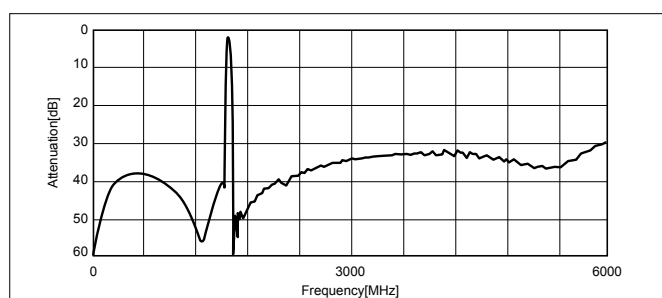


Spurious Characteristics

<GPS Single Front End>Parts No. : SF16-1575M4UU01



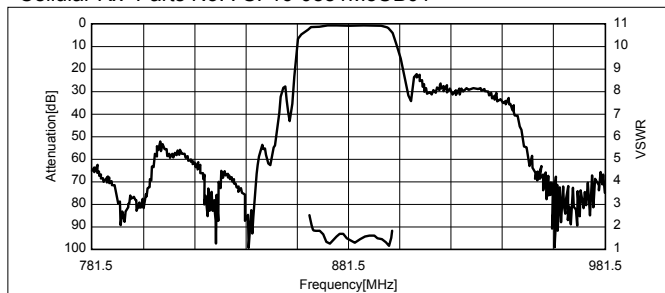
Pass Band Characteristics



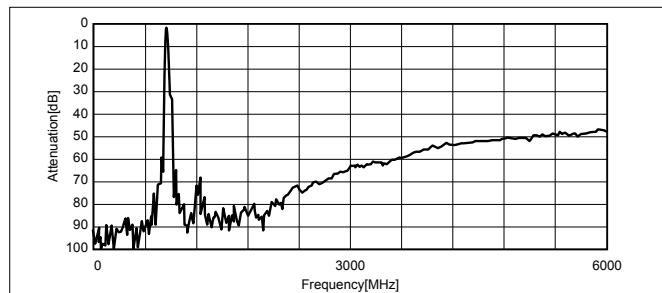
Spurious Characteristics

Characteristics

<Cellular Rx>Parts No. : SF16-0881M5UB01

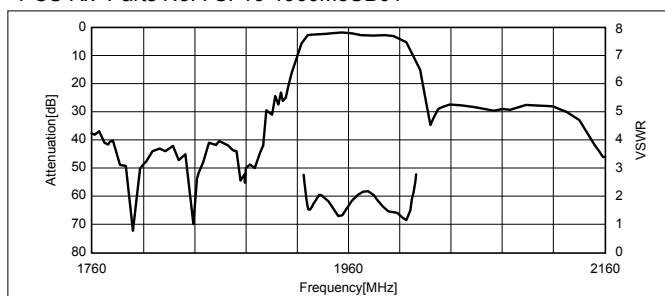


Pass Band Characteristics

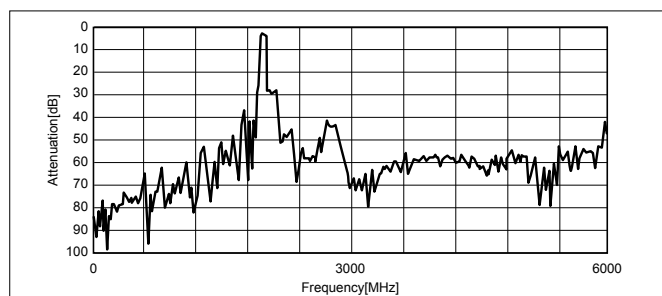


Spurious Characteristics

<PCS Rx>Parts No. : SF16-1960M5UB01



Pass Band Characteristics



Spurious Characteristics



Surface Acoustic Wave (SAW) Filters

IF SAW Filters for W-CDMA

SF3030B190M00B04MA00/ SF3838B190M00B04MA00



Pb Free

RoHS Compliant

Features

- Wide-band IF filter
- Miniature size and light weight
- Excellent phase characteristics
- Balance connection is available

Standard Frequency

- 190.0MHz

How to Order

SF 3030 B 190M00 B 04M A00
① ② ③ ④ ⑤ ⑥ ⑦

- ① Type of Product (SAW Filter)
- ② Package Size (3.0×3.0mm)
- ③ Sealing Type (Seam Weld Type)
- ④ Nominal Frequency (190.00MHz)
- ⑤ Material ($\text{Li}_2\text{B}_4\text{O}_7$)
- ⑥ Pass Bandwidth (4MHz)
- ⑦ Customer Special Model Suffix (STD)

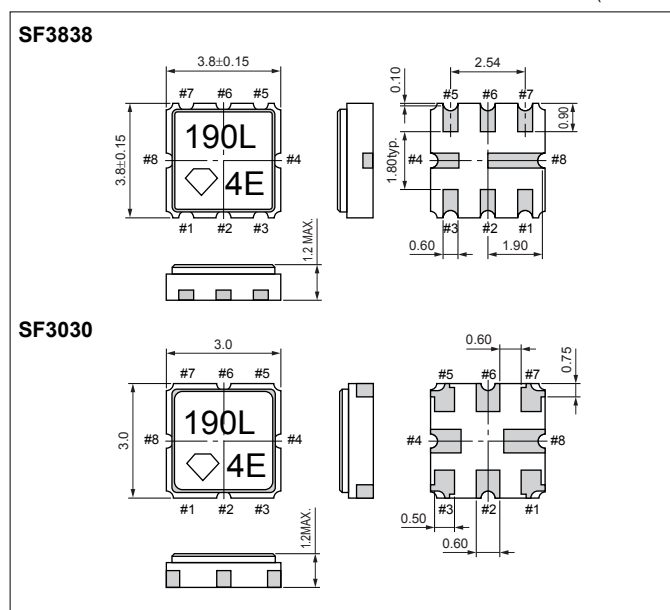
New Part Number	Old Part Number
SF3030B190M00B04MA00	LSFB71-190-004M0
SF3838B190M00B04MA00	LSFB70-190-004M0

Specifications

Type		SF3030B190M00B04MA00/ SF3838B190M00B04MA00	
Item	Unit	Conditions	Specifications
Nominal Frequency (Fo)	MHz	—	190.000
Operating Temperature Range	°C	-20 to +85°C	—
Storage Temperature Range	°C	-40 to +85°C	—
Pass Bandwidth	MHz	-3dB	Fo±2.3MHz MIN.
Ripple	dB	Fo±2.3MHz	2 MAX.
Insertion Loss	dB	Fo	7 MAX.
Guaranteed Attenuation	dB	Fo±5 to ±7.5MHz	10 MIN.
		Fo±7.5 to ±12.5MHz	25 MIN.
		Fo±12.5 to ±100MHz	40 MIN.
Group Delay Deviation	ns	Fo±2MHz	100 MAX.

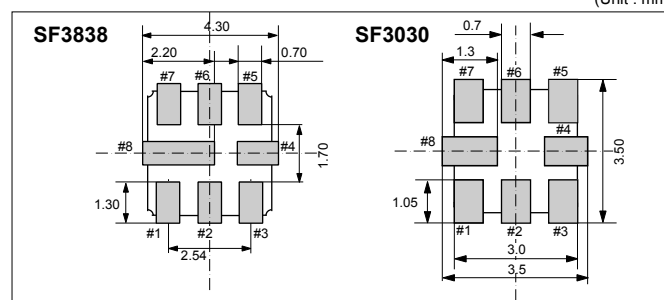
Dimensions

(Unit : mm)

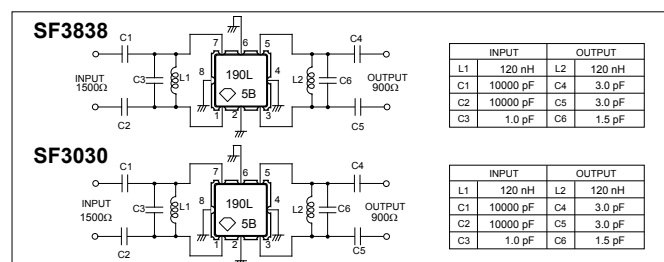


Recommended Land Pattern

(Unit : mm)



Test Circuit

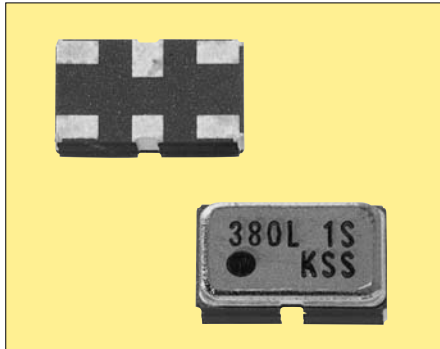




Surface Acoustic Wave (SAW) Filters

IF SAW Filters for W-CDMA

SF5032B380M00B03MA00/ SF5032B190M00B03MA02



Pb Free

RoHS Compliant

Features

- Wide-band IF filter for W-CDMA
- Miniature size and light weight
- Excellent phase characteristics
- Balance connection is available

Standard Frequency

- 380MHz
- 190MHz

How to Order

SF 5032 B 380M00 B 03M A00
① ② ③ ④ ⑤ ⑥ ⑦

- ① Type of Product (SAW Filter)
- ② Package Size (5.0×3.2mm)
- ③ Sealing Type (Seam Weld Type)
- ④ Nominal Frequency (380MHz)
- ⑤ Material (Li₂B₄O₇)
- ⑥ Pass Bandwidth (3.84MHz)
- ⑦ Customer Special Model Suffix (STD)

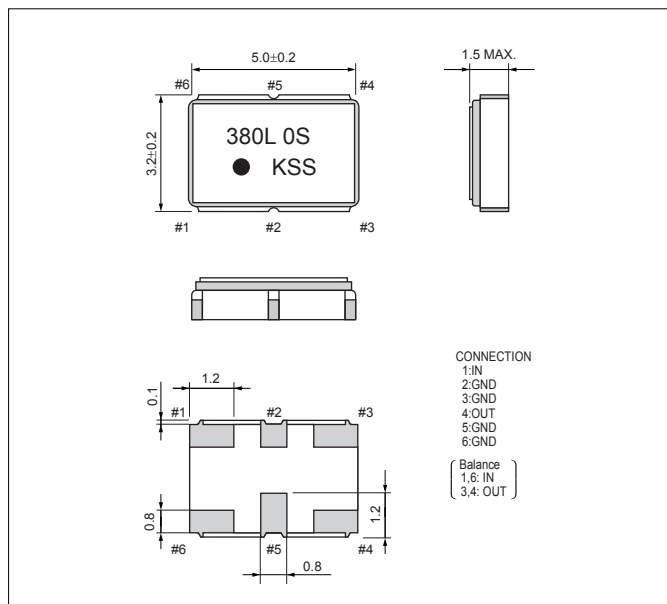
New Part Number	Old Part Number
SF5032B380M00B03MA00	LSFB54-380-004M0
SF5032B190M00B03MA02	LSFB54-190-004M2

Specifications

Type		SF5032B190M00B03MA02		SF5032B380M00B03MA00	
Item	Unit	Conditions	Specifications	Conditions	Specifications
Nominal Frequency (Fo)	MHz	—	190.000	—	380.000
Operating Temperature Range	°C	−20 to +75°C	—	−20 to +75°C	—
Storage Temperature Range	°C	−40 to +80°C	—	−40 to +80°C	—
Pass Bandwidth	MHz	−3dB	Fo±1.92MHz MIN.	−3dB	Fo±1.92MHz MIN.
Ripple	dB	±1.92MHz	1.5 MAX.	±1.92MHz	2 MAX.
Insertion Loss	dB	Minimum Loss	9 MAX.	Maximum Loss (±1.92MHz)	10 MAX.
Guaranteed Attenuation	dB	Fo± 5MHz	20 MIN.	Fo±5MHz	25 MIN.
		Fo±10MHz	40 MIN.	Fo± 10MHz	30 MIN.
Group Delay Deviation	ns	Fo±1.92MHz	140 MAX.	Fo± 1.92MHz	300 MAX.

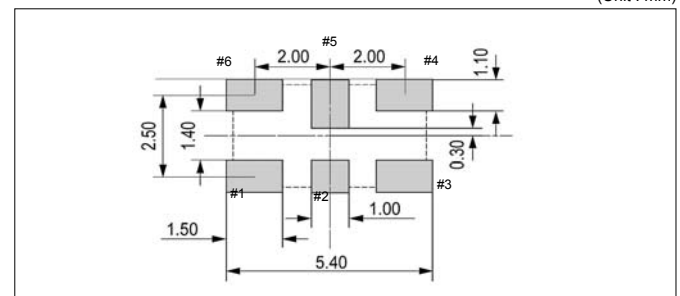
Dimensions

(Unit : mm)

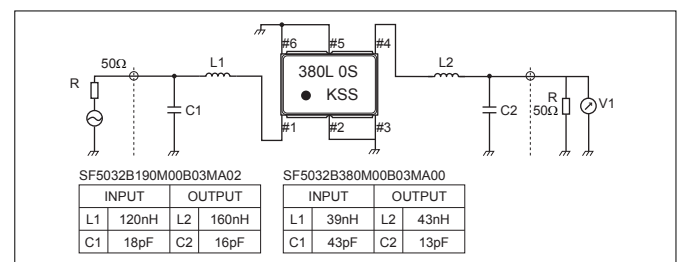


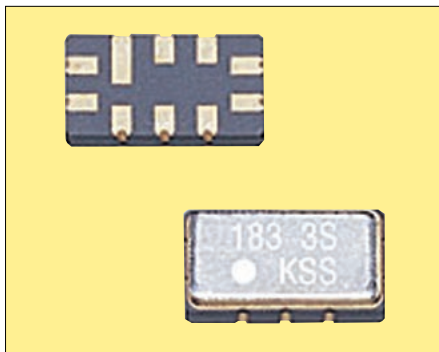
Recommended Land Pattern

(Unit : mm)



Test Circuit





Pb Free

RoHS Compliant

Features

- Miniature size and light weight
- Wide-Band IF filter for CDMA
- Excellent group delay distortion
- Balance connection is available

Standard Frequency

- 183.6MHz

How to Order

SF 6035 B 183M60 C 01M A00
① ② ③ ④ ⑤ ⑥ ⑦

- ① Type of Product (SAW Filter)
- ② Package Size (6.0×3.5mm)
- ③ Sealing Type (Seam Weld Type)
- ④ Nominal Frequency (183.6MHz)
- ⑤ Material (Quartz Crystal)
- ⑥ Pass Bandwidth (1.23MHz)
- ⑦ Customer Special Model Suffix (STD)

New Part Number	Old Part Number
SF6035B183M60C01MA00	MSFB55-183-001M0

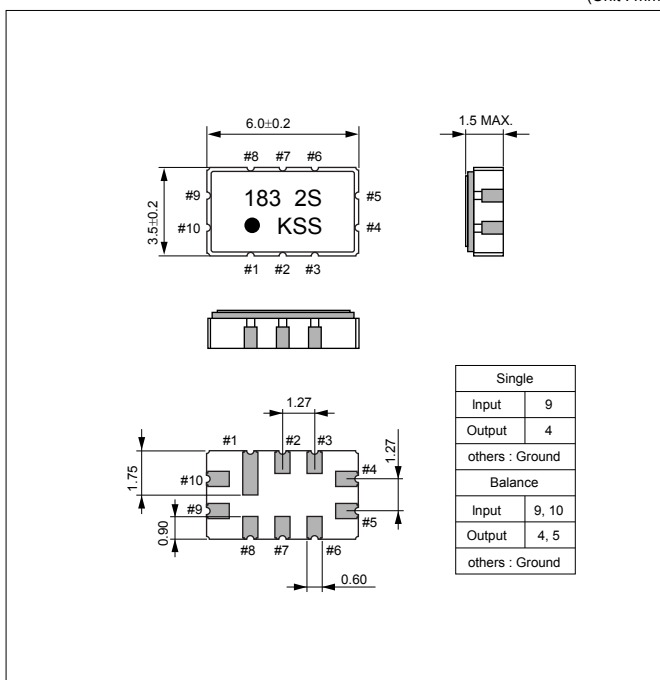
Specifications

Item	Unit	Conditions	Specifications	
Nominal Frequency (Fo)	MHz	—	183.6	
Operating Temperature Range	°C	−30 to +80	—	
Storage Temperature Range	°C	−40 to +85	—	
Pass Bandwidth	kHz	−5dB	±650*	±615 MIN.
Ripple	dB	Fo±300kHz	0.3*	1.0 MAX.
Insertion Loss	dB	Minimum Loss	8.0*	10.5 MAX.
Guaranteed Attenuation	dB	Fo±900kHz	−900/40*	33 MIN.
			+900/40*	33 MIN.
		Fo±1.25MHz	−1.25/39*	33 MIN.
			+1.25/40*	33 MIN.
Group Delay Deviation	ns	Fo±300kHz	250*	500 MAX.

* : Typ.

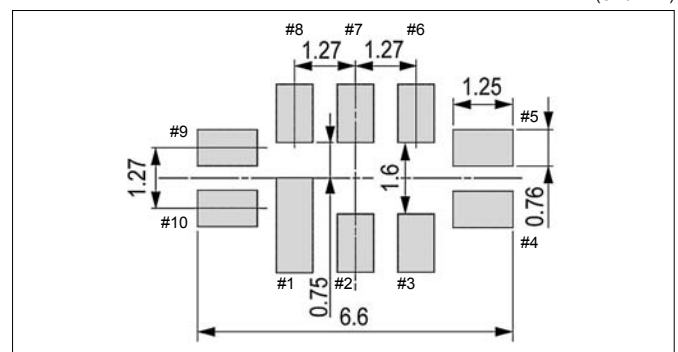
Dimensions

(Unit : mm)

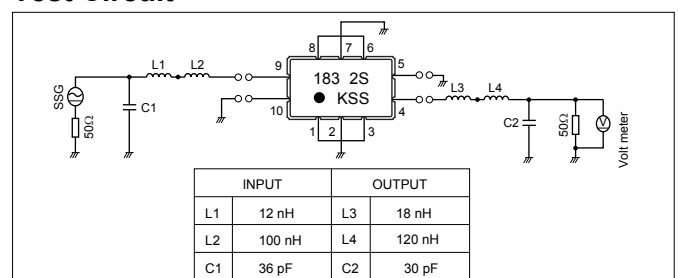


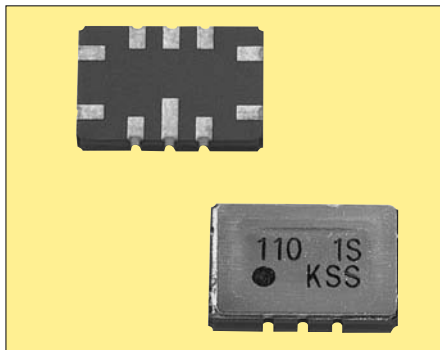
Recommended Land Pattern

(Unit : mm)



Test Circuit





Please contact us about Pb free status.

Features

- Wide-band IF filter for cdmaOne
- Excellent phase characteristics
- Balance connection is available

Standard Frequency

- 110.0MHz

How to Order

SF 7050 C 110M00 C 01M A00
① ② ③ ④ ⑤ ⑥ ⑦

- ① Type of Product (SAW Filter)
- ② Package Size (7.0×5.0mm)
- ③ Sealing Type (Solder Weld Type)
- ④ Nominal Frequency (110MHz)
- ⑤ Material (Quartz Crystal)
- ⑥ Pass Bandwidth (1.24MHz)
- ⑦ Customer Special Model Suffix (STD)

New Part Number	Old Part Number
SF7050C110M00C01MA00	MSFC30-110-001M0

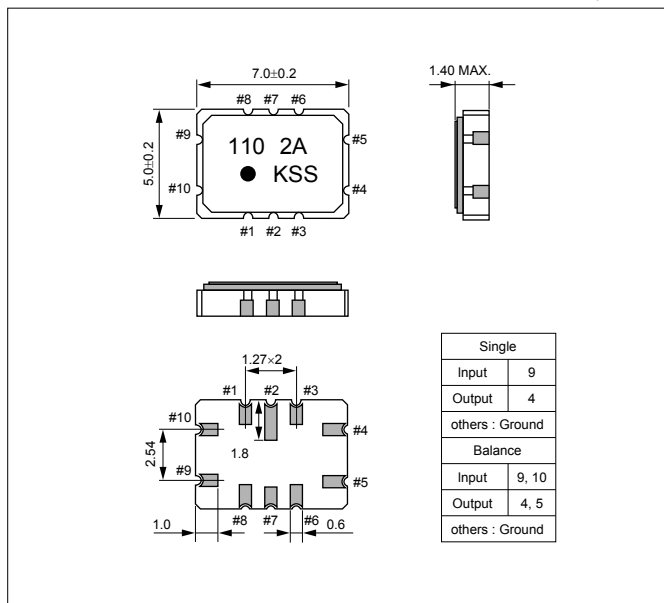
Specifications

Item	Unit	Conditions	Specifications	
Nominal Frequency (Fo)	MHz	—	110.00	
Operating Temperature Range	°C	−30 to +80	—	
Storage Temperature Range	°C	−40 to +85	—	
Pass Bandwidth	kHz	−5dB	−645*	±620 MIN.
			+670*	
Ripple	dB	Fo±300kHz	0.2*	1 MAX.
Insertion Loss	dB	Minimum Loss	9.4*	12 MAX.
Guaranteed Attenuation	dB	Fo±900kHz	−900/43*	33 MIN.
			+900/40*	
		Fo±1.7MHz	−1.7/43*	33 MIN.
			+1.7/38*	
Group Delay Deviation	ns	Fo±300kHz	280*	500 MAX.

* : Typ.

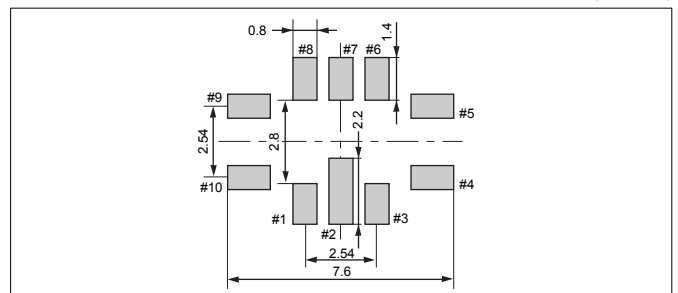
Dimensions

(Unit : mm)

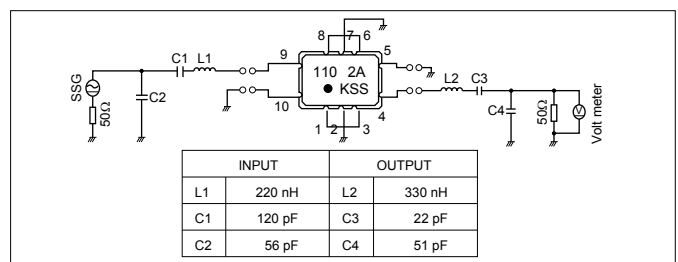


Recommended Land Pattern

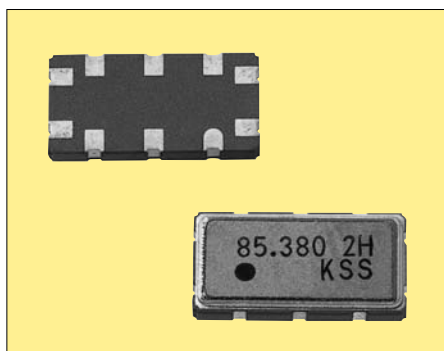
(Unit : mm)



Test Circuit



INPUT		OUTPUT	
L1	220 nH	L2	330 nH
C1	120 pF	C3	22 pF
C2	56 pF	C4	51 pF



Pb Free

RoHS Compliant

Features

- Wide-band IF filter for cdmaOne
- Miniature size and light weight
- Excellent phase characteristics
- Balance connection is available

Standard Frequency

- 85.380MHz

How to Order

SF 9148 B 085M38 C 01M A00
① ② ③ ④ ⑤ ⑥ ⑦

- ① Type of Product (SAW Filter)
- ② Package Size (9.1×4.8mm)
- ③ Sealing Type (Seam Weld Type)
- ④ Nominal Frequency (85.380MHz)
- ⑤ Material (Quartz Crystal)
- ⑥ Pass Bandwidth (1.24MHz)
- ⑦ Customer Special Model Suffix (STD)

New Part Number	Old Part Number
SF9148B085M38C01MA00	MSFB43-85-001M0

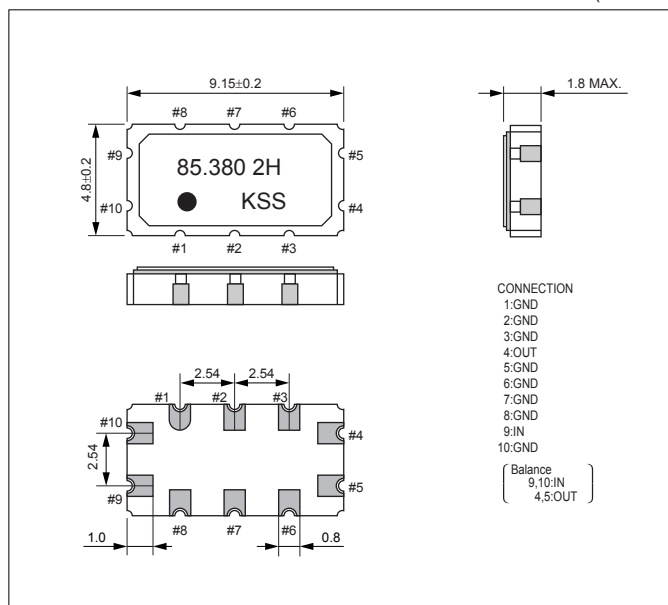
Specifications

Item	Unit	Conditions	Specifications	
Nominal Frequency (Fo)	MHz	—	85.38	
Operating Temperature Range	°C	-30 to +80	—	
Storage Temperature Range	°C	-40 to +85	—	
Pass Bandwidth	kHz	-5dB	-640* +650*	±620 MIN.
Ripple	dB	Fo±300kHz	0.4*	1 MAX.
Insertion Loss	dB	Fo	9.1*	12 MAX.
Guaranteed Attenuation	dB	Fo±900kHz	-900/48* +900/42*	33 MIN.
Group Delay Deviation	ns	Fo±300kHz	270*	500 MAX.

* : Typ.

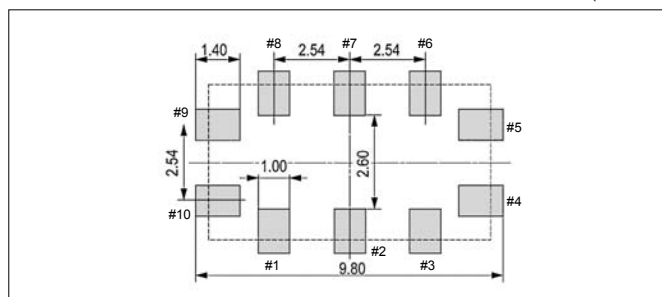
Dimensions

(Unit : mm)

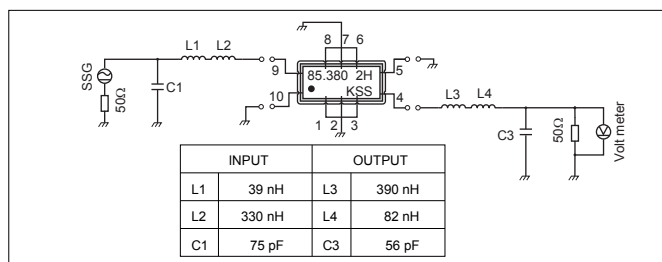


Recommended Land Pattern

(Unit : mm)



Test Circuit





Pb Free

RoHS Compliant

Features

- IF filter for SCDMA
- Miniature size and light weight
- Excellent phase characteristics
- Balance connection is available

Standard Frequency

- 204MHz

How to Order

SF 7050 B 204M00 C 600 A00
① ② ③ ④ ⑤ ⑥ ⑦

- ① Type of Product (SAW Filter)
- ② Package Size (7.0×5.0mm)
- ③ Sealing Type (Seam Weld Type)
- ④ Nominal Frequency (204.00MHz)
- ⑤ Material (Quartz Crystal)
- ⑥ Pass Bandwidth (600kHz)
- ⑦ Customer Special Model Suffix (STD)

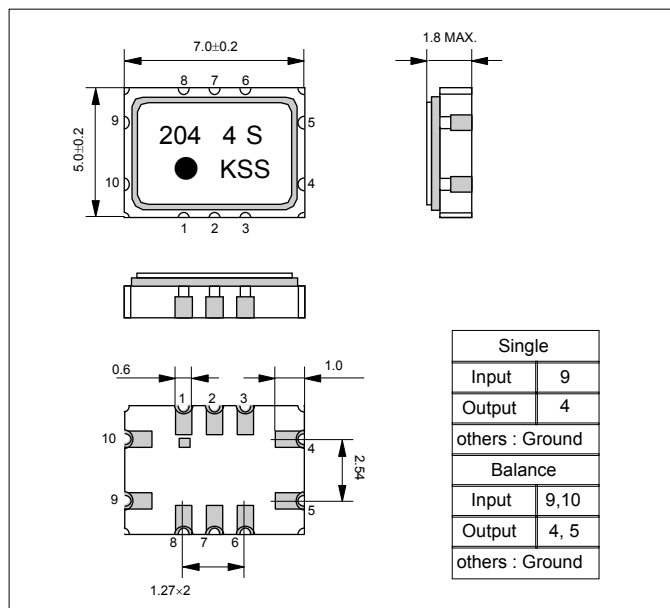
New Part Number	Old Part Number
SF7050B204M00C600A00	MSFB30-204-600K0

Specifications

Item	Unit	Conditions	Specifications
Nominal Frequency (Fo)	MHz	—	204.000
Operating Temperature Range	°C	-20 to +70°C	—
Storage Temperature Range	°C	-40 to +85°C	—
Pass Bandwidth	kHz	-1dB	Fo±225
Insertion Loss	dB	Fo	8.8 MAX.
Guaranteed Attenuation	dB	Fo±1MHz	30 MIN.
		Fo±2MHz	40 MIN.
Group Delay Deviation	ns	Fo±225kHz	300 MAX.

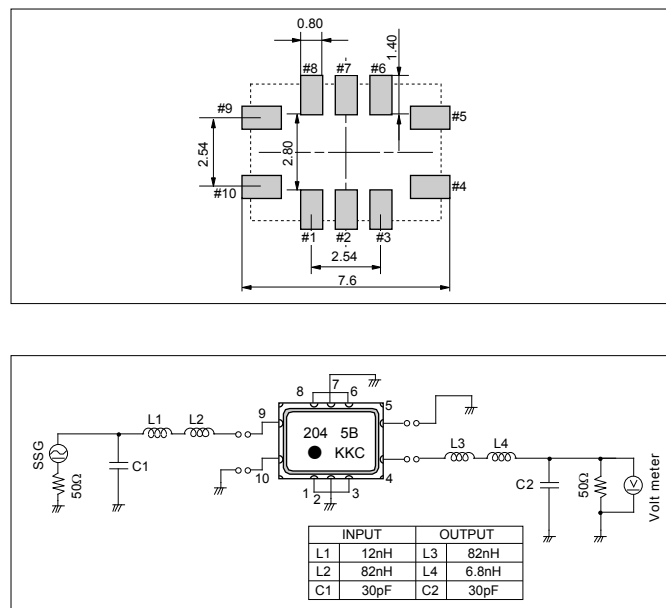
Dimensions

(Unit : mm)



Recommended Land Pattern

(Unit : mm)

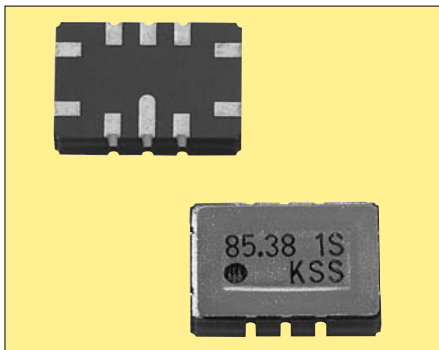




Surface Acoustic Wave (SAW) Filters

IF SAW Filters for AMPS

SF7050C083M16C026A00/ SF7050C085M38C026A01



Please contact us about Pb free status.

Features

- Narrow-band IF filter for AMPS
- Miniature size and light weight
- Excellent group delay distortion

Standard Frequency

- 83.16MHz
- 85.38MHz

How to Order

SF 7050 C 083M16 C 026 A00
① ② ③ ④ ⑤ ⑥ ⑦

- ① Type of Product (SAW Filter)
- ② Package Size (7.0×5.0mm)
- ③ Sealing Type (Solder Weld Type)
- ④ Nominal Frequency (83.16MHz)
- ⑤ Material (Quartz Crystal)
- ⑥ Pass Bandwidth (26kHz)
- ⑦ Customer Special Model Suffix (STD)

New Part Number	Old Part Number
SF7050C083M16C026A00	MSFC12-83-026K0
SF7050C085M38C026A01	MSFC12-85-026K1

Specifications

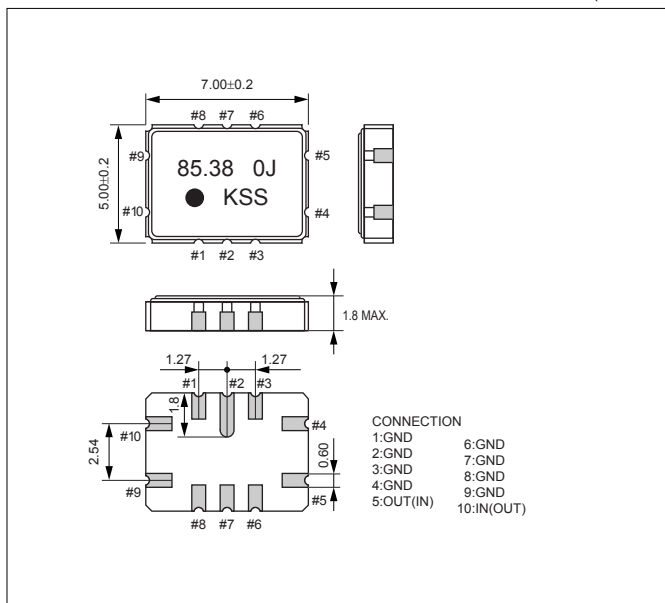
Type		SF7050C083M16C026A00			SF7050C085M38C026A01		
Item	Unit	Conditions	Specifications		Conditions	Specifications	
Nominal Frequency (Fo)	MHz	—	83.16		—	85.38	
Operating Temperature Range	°C	−25 to +75	—		−30 to +80	—	
Storage Temperature Range	°C	−35 to +85	—		−40 to +85	—	
Pass Bandwidth	kHz	−3dB	Fo±13 MIN.		−3dB	Fo±13 MIN.	
Ripple	dB	Fo±13kHz	0*	1.5 MAX.	Fo±10kHz	0*	1.5 MAX.
Insertion Loss	dB	Minimum Loss	3.5*	5 MAX.	Minimum Loss	3.5*	5 MAX.
Guaranteed Attenuation	dB	Fo−120kHz	64*	50 MIN.	Fo−120kHz	59*	40 MIN.
		Fo±60kHz	35*	25 MIN.	Fo±60kHz	33*	25 MIN.
		Fo+120kHz	60*	50 MIN.	Fo+120kHz	65*	40 MIN.
Group Delay Deviation	μS	Fo±13kHz	6*	10 MAX.	Fo±10kHz	5*	12 MAX.
Terminating Impedance	Ω/pF	—	810//−1.5		MSFC12	980//−1.2	

* : Typ.

* : Typ.

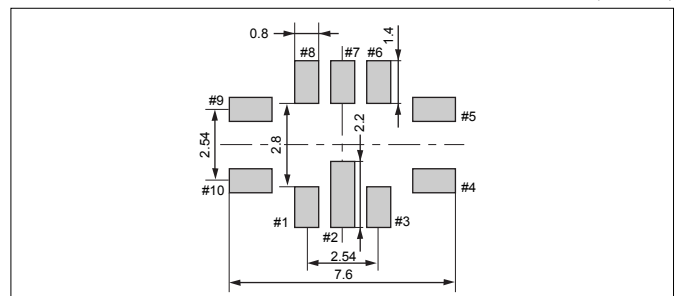
Dimensions

(Unit : mm)

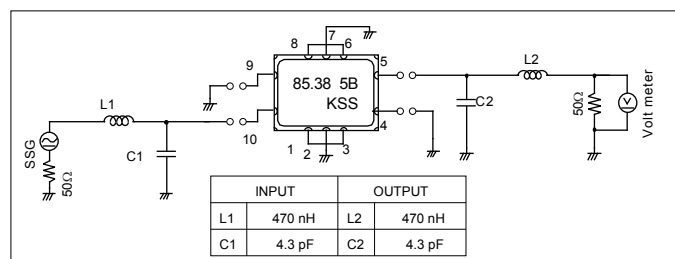


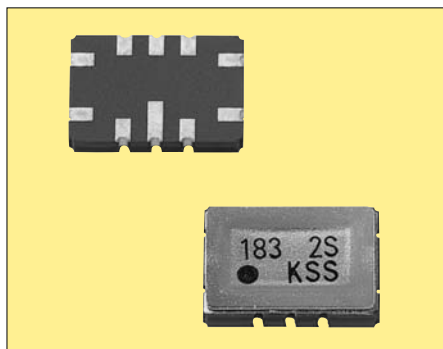
Recommended Land Pattern

(Unit : mm)



Test Circuit





Please contact us about Pb free status.

Features

- Narrow-band IF filter for AMPS
- Miniature size and light weight
- Excellent group delay distortion

Standard Frequency

- 183.6MHz

How to Order

SF 7050 C 183M60 C 022 B00
① ② ③ ④ ⑤ ⑥ ⑦

- ① Type of Product (SAW Filter)
- ② Package Size (7.0×5.0mm)
- ③ Sealing Type (Solder Weld Type)
- ④ Nominal Frequency (183.6MHz)
- ⑤ Material (Quartz Crystal)
- ⑥ Pass Bandwidth (22kHz)
- ⑦ Customer Special Model Suffix (STD)

New Part Number	Old Part Number
SF7050C183M60C22B00	MSFC30-183-022K0

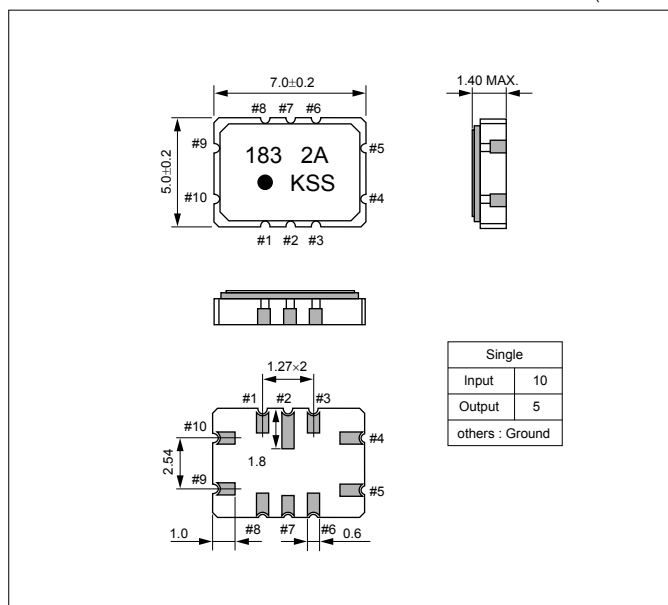
Specifications

Item	Unit	Conditions	Specifications	
Nominal Frequency (Fo)	MHz	—	183.6	
Operating Temperature Range	°C	−25 to +75	—	
Storage Temperature Range	°C	−35 to +85	—	
Pass Bandwidth	kHz	−3dB	±11 MIN.	
Ripple	dB	Fo±11kHz	0*	1.5 MAX.
Insertion Loss	dB	Minimum Loss	4.5*	5.5 MAX.
Guaranteed Attenuation	dB	Fo±60kHz	−60/27	11 MIN.
			+60/21	
		Fo±120kHz	−120/51	40 MIN.
			+120/49	
Group Delay Deviation	μs	Fo±11kHz	1.2*	15 MAX.

* : Typ.

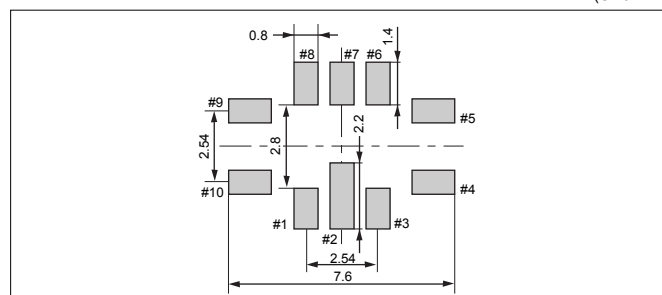
Dimensions

(Unit : mm)

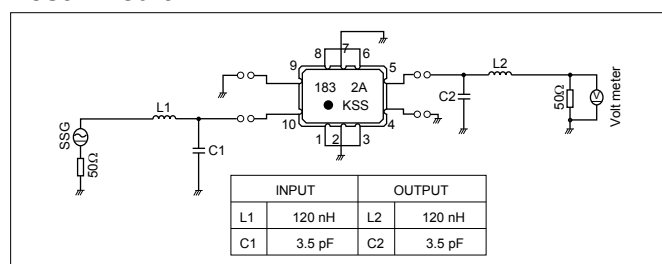


Recommended Land Pattern

(Unit : mm)



Test Circuit





Surface Acoustic Wave (SAW) Filters

300MHz Band SAW Filters for RKE

SF3838B315M00C300A00/ SF3838B315M00B200A00



Pb Free

RoHS Compliant

Features

- RF filter for RKE (Remote Keyless Entry)
- Miniature size and light weight
- Excellent temperature characteristics (SF3838B315M00C300A00)
- Excellent attenuation (SF3838B315M00B200A00)

Standard Frequency

- 315MHz

How to Order

SF 3838 B 315M00 C 300 A00
① ② ③ ④ ⑤ ⑥ ⑦

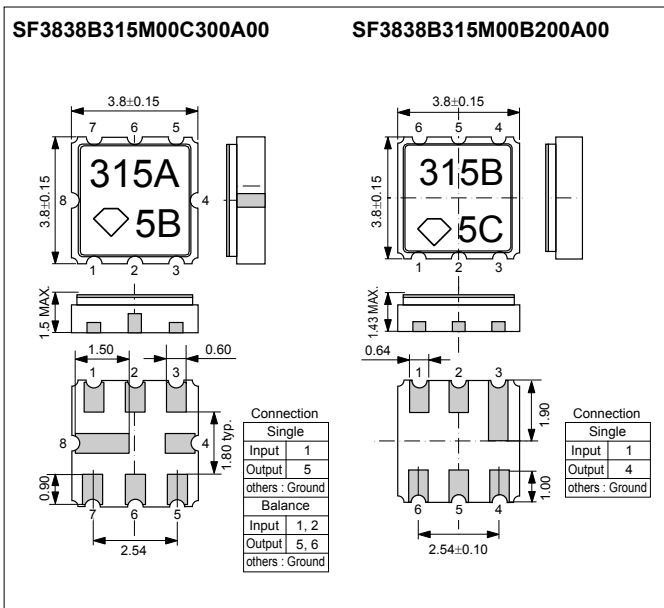
- ① Type of Product (SAW Filter)
- ② Package Size (3.8×3.8mm)
- ③ Sealing Type (Seam Weld Type)
- ④ Nominal Frequency (315.00MHz)
- ⑤ Material (Quartz Crystal)
- ⑥ Pass Bandwidth (300kHz)
- ⑦ Customer Special Model Suffix (STD)

Specifications

Type		SF3838B315M00C300A00		SF3838B315M00B200A00	
Item	Unit	Conditions	Specifications	Conditions	Specifications
Nominal Frequency	MHz	—	315.000	—	315.000
Operating Temperature Range	°C	−40 to +105°C	—	−40 to +85°C	—
Storage Temperature Range	°C	−40 to +105°C	—	−40 to +85°C	—
Pass Bandwidth	kHz	−3dB	Fo±150 MIN.	−3dB	Fo±100 MIN.
Insertion Loss	dB	MIN.	2.5 MAX.	MIN.	3 MAX.
Guaranteed Attenuation	dB	10 to 303.5MHz	45 MIN.	Fo±5MHz	40 MIN.
		303.5 to 311MHz	25 MIN.	Fo±10MHz	55 MIN.
		—	—	Fo±21.4MHz	60 MIN.
		325 to 600MHz	35 MIN.	—	—
		600 to 1000MHz	60 MIN.	—	—
Ripple	dB	—	1dB MAX.	—	—

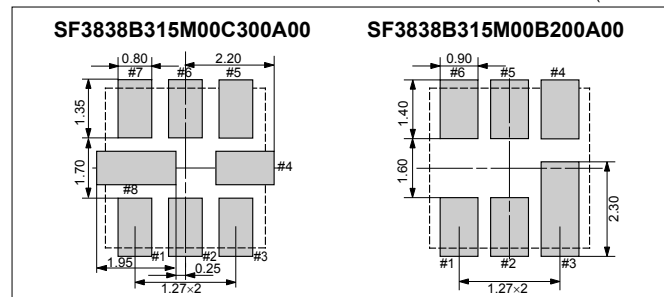
Dimensions

(Unit : mm)



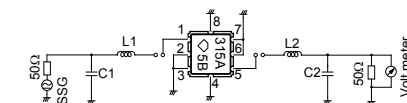
Recommended Land Pattern

(Unit : mm)



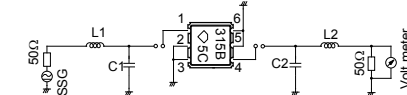
Test Circuit

SF3838B315M00C300A00



INPUT		OUTPUT	
L1	56 nH	L2	56 nH
C1	—	C2	—

SF3838B315M00B200A00



INPUT		OUTPUT	
L1	100 nH	L2	100 nH
C1	1 pF	C2	1 pF



Surface Acoustic Wave (SAW) Filters

400MHz Band SAW Filters for RKE

SF3838B433M92C300A00/ SF3838B433M92B200A00



Pb Free

RoHS Compliant

Features

- RF filter for RKE (Remote Keyless Entry)
- Miniature size and light weight
- Excellent temperature characteristics (SF3838B433M92C300A00)
- Excellent attenuation (SF3838B433M92B200A00)

Standard Frequency

- 433.92MHz

How to Order

SF 3838 B 433M92 C 300 A00
① ② ③ ④ ⑤ ⑥ ⑦

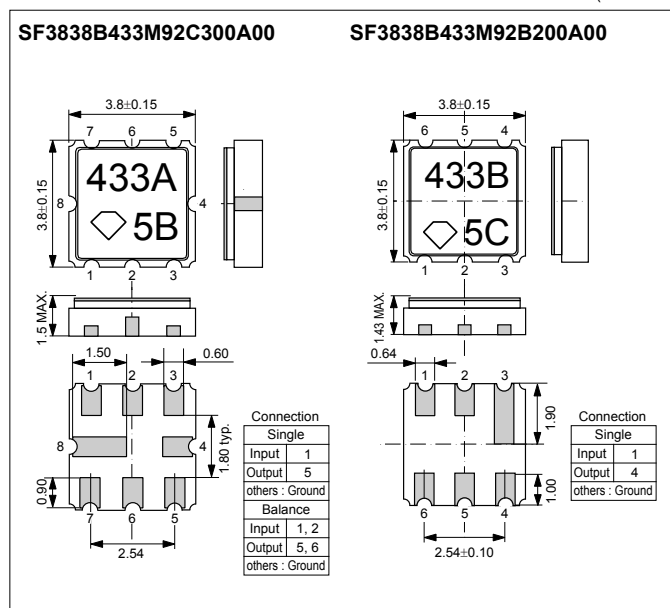
- ① Type of Product (SAW Filter)
- ② Package Size (3.8×3.8mm)
- ③ Sealing Type (Seam Weld Type)
- ④ Nominal Frequency (433.92MHz)
- ⑤ Material (Quartz Crystal)
- ⑥ Pass Bandwidth (300kHz)
- ⑦ Customer Special Model Suffix (STD)

Specifications

Type		SF3838B433M92C300A00		SF3838B433M92B200A00	
Item	Unit	Conditions	Specifications	Conditions	Specifications
Nominal Frequency	MHz	—	433.920	—	433.920
Operating Temperature Range	°C	−40 to +105°C	—	−40 to +85°C	—
Storage Temperature Range	°C	−40 to +105°C	—	−40 to +85°C	—
Pass Bandwidth	kHz	−3dB	Fo±150 MIN.	−3dB	Fo±100 MIN.
Insertion Loss	dB	MIN.	2.5 MAX.	MIN.	3 MAX.
Guaranteed Attenuation	dB	10 to 424MHz	45 MIN.	Fo±5MHz	40 MIN.
		424 to 432MHz	25 MIN.	Fo±10.7MHz	55 MIN.
		445 to 800MHz	45 MIN.	Fo±21.4MHz	60 MIN.
		800 to 1000MHz	60 MIN.	—	—
Ripple	dB	—	1dB MAX.	—	—

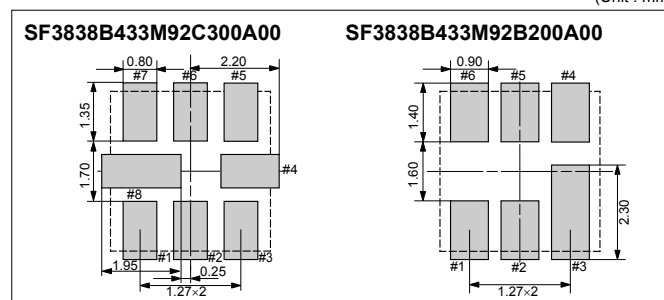
Dimensions

(Unit : mm)



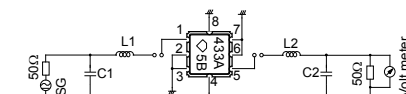
Recommended Land Pattern

(Unit : mm)



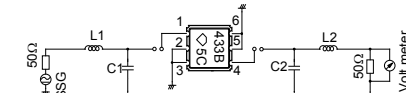
Test Circuit

SF3838B433M92C300A00

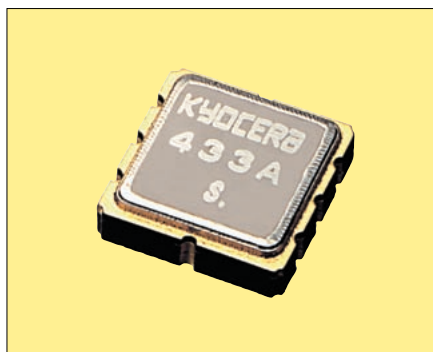


INPUT		OUTPUT	
L1	47 nH	L2	47 nH
C1	3.0 pF	C2	3.0 pF

SF3838B433M92B200A00



INPUT		OUTPUT	
L1	62 nH	L2	62 nH
C1	0.5 pF	C2	0.5 pF



Pb Free

RoHS Compliant

Features

- Small and low profile
- Flat pass band characteristics
- Low insertion loss
- Excellent temperature stability

Application

- Remote Keyless Entry

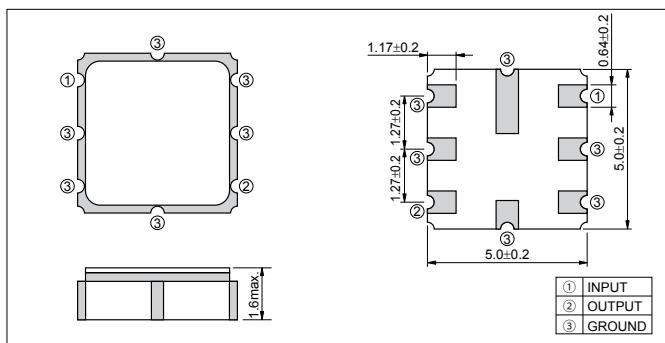
How to Order

PAFC 433.92 AR 00
① ② ③ ④

- ① Series
- ② Center Frequency
- ③ Type
- ④ Option

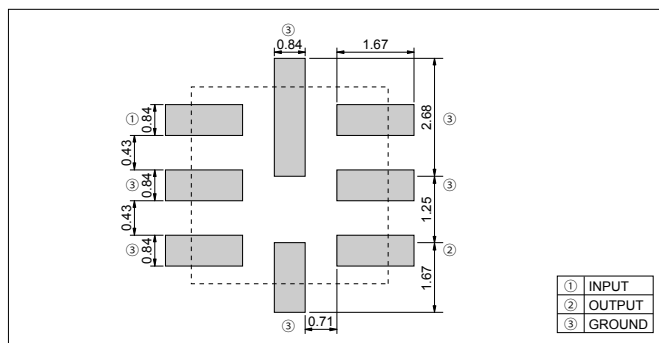
Dimensions

(Unit : mm)



Recommended Land Pattern

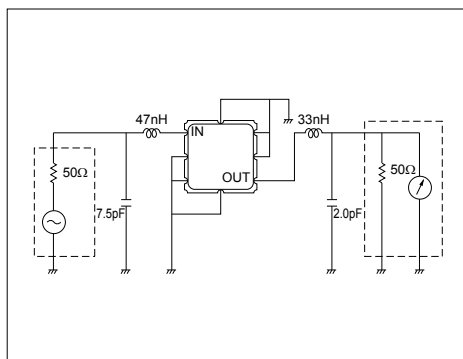
(Unit : mm)



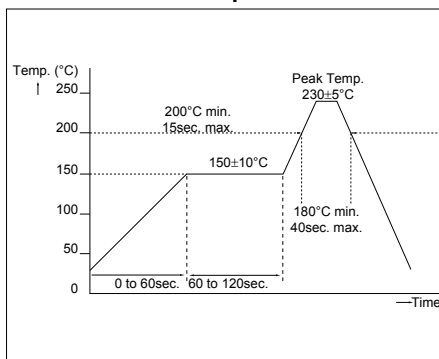
Specifications

Parts No.	Nominal Center Frequency (fn)	Insertion Loss	Pass Band Width (at 3dB)	Stop Band Attenuation						Operating Temperature	Storage Temperature
PAFC433.92AR00	433.920 MHz	4.0dB max.	Fn±200kHz min.	10MHz	414MHz	428MHz	434.92MHz	442MHz	550MHz	-40 to 85°C	-40 to 85°C
				414MHz	428MHz	432.92MHz	442MHz	550MHz	1000MHz		
				42dB min.	35dB min.	15dB min.	10dB min.	35dB min.	40dB min.		

Test Circuit

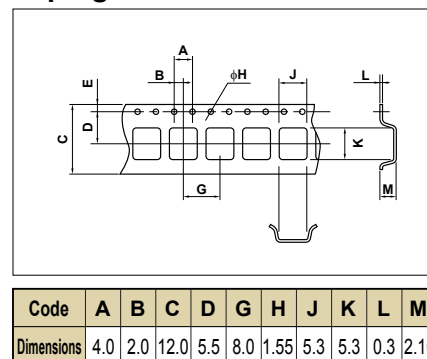


Recommended Temperature IR Reflow



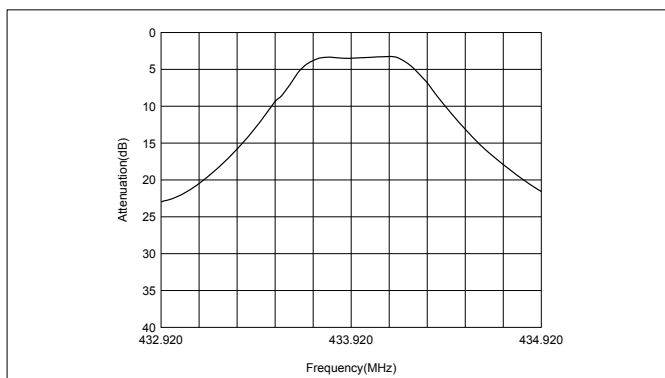
Taping Dimensions

(Unit : mm)

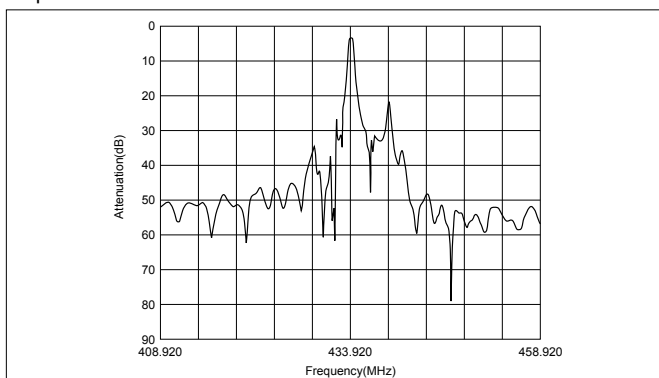


Characteristics

• Pass Band Characteristics



• Spurious Characteristics





Surface Acoustic Wave (SAW) Filters

800MHz Band SAW Filters for RKE

SF5050B868M30C600A00



Pb Free

RoHS Compliant

Features

- Miniature size and light weight
- For European remote keyless entry system

Standard Frequency

- 868.3MHz

How to Order

SF 5050 B 868M30 C 600 A00
① ② ③ ④ ⑤ ⑥ ⑦

- ① Type of Product (SAW Filter)
- ② Package Size (5.0×5.0mm)
- ③ Sealing Type (Seam Weld Type)
- ④ Nominal Frequency (868.3MHz)
- ⑤ Material (Quartz Crystal)
- ⑥ Pass Bandwidth (600kHz)
- ⑦ Customer Special Model Suffix (STD)

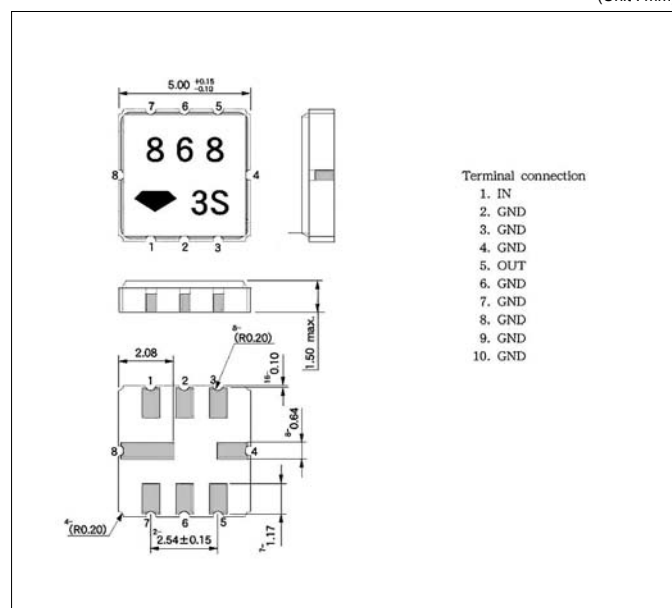
New Part Number	Old Part Number
SF5050B868M30C600A00	MSFB47-868-600K0

Specifications

Item	Unit	Conditions	Specifications
Nominal Frequency (Fo)	MHz	—	868.3
Operating Temperature Range	°C	−45 to +90	—
Storage Temperature Range	°C	−45 to +90	—
Pass Bandwidth	kHz	−3dB	±300 MIN.
Ripple	dB	Fo±300kHz	1.5 MAX.
Insertion Loss	dB	Minimum Loss	4.2 MAX.
Guaranteed Attenuation	dB	−168.3MHz to −38.3MHz	35 MIN.
		−38.3MHz to −18.3MHz	32 MIN.
		−18.3MHz to −3.3MHz	25 MIN.
		+2.7MHz to +6.2MHz	11 MIN.
		+6.2MHz to +14.7MHz	22 MIN.
		+14.7MHz to +31.7MHz	30 MIN.
		+31.7MHz to +131.7MHz	35 MIN.
Terminating Impedance	Ω/pF	—	315//−1.1

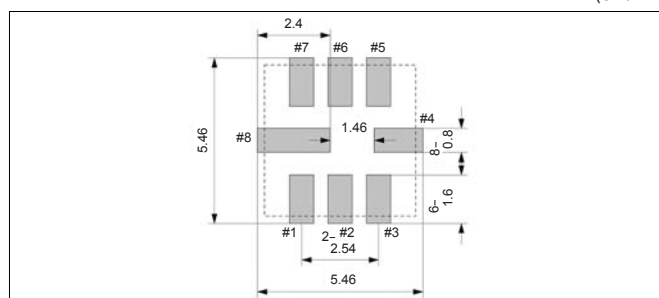
Dimensions

(Unit : mm)

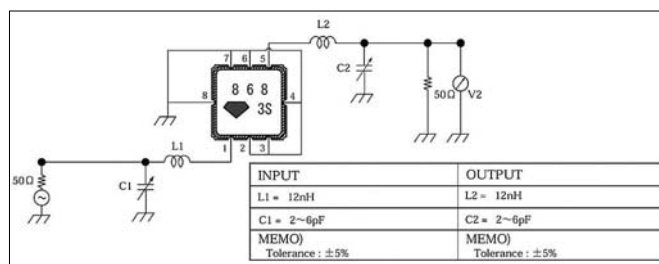


Recommended Land Pattern

(Unit : mm)



Test Circuit





Surface Acoustic Wave (SAW) Filters

400MHz Band SAW Filters for Low Power Radio Communications

SF3030B428M00T04MA02



Pb Free

RoHS Compliant

Features

- RF filter for transmitter and receiver
- For low power radio communications
- Miniature size and light weight

Standard Frequency

- 428.00MHz

How to Order

SF 3030 B 428M00 T 04M A02
① ② ③ ④ ⑤ ⑥ ⑦

- ① Type of Product (SAW Filter)
- ② Package Size (3.0×3.0mm)
- ③ Sealing Type (Seam Weld Type)
- ④ Nominal Frequency (428.00MHz)
- ⑤ Material (LiTaO₃)
- ⑥ Pass Bandwidth (4MHz)
- ⑦ Customer Special Model Suffix (STD)

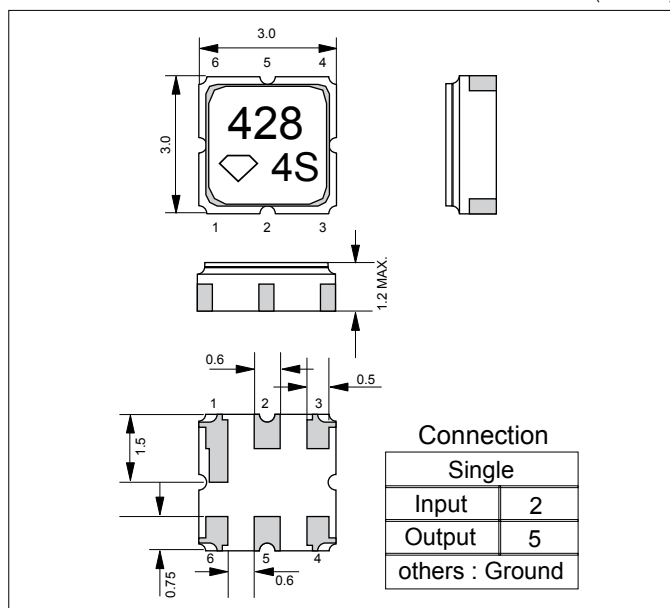
New Part Number	Old Part Number
SF3030B428M00T04MA02	TSFB-428-004M2

Specifications

Item	Unit	Conditions	Specifications
Nominal Frequency (Fo)	MHz	—	428.000
Operating Temperature Range	°C	-20 to +85°C	—
Storage Temperature Range	°C	-40 to +85°C	—
Ripple	dB	Fo±2MHz	1.5dB MAX.
Insertion Loss	dB	MAX.	3 MAX.
Guaranteed Attenuation	dB	383 to 389MHz	50 MIN.
Terminating Impedance	Ω	—	50

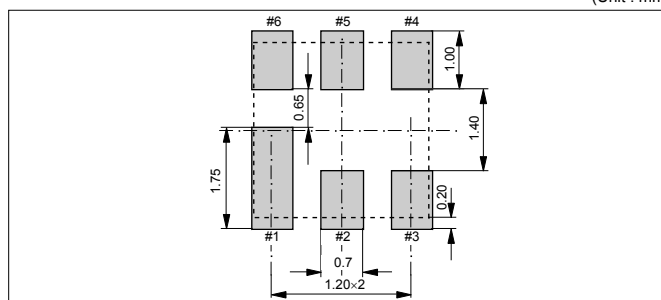
Dimensions

(Unit : mm)

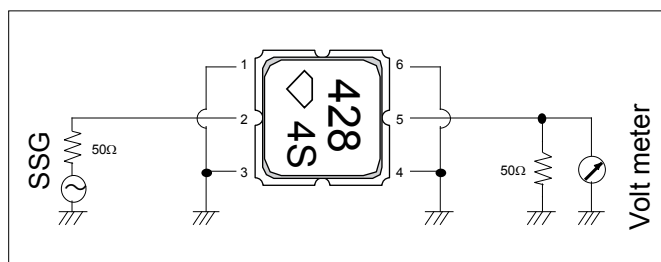


Recommended Land Pattern

(Unit : mm)



Test Circuit

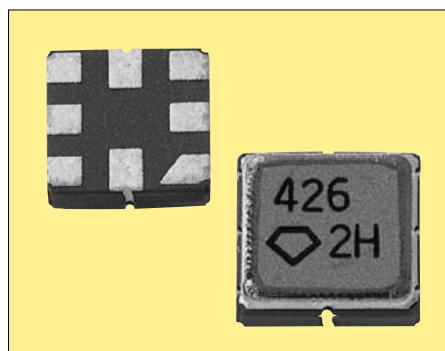




Surface Acoustic Wave (SAW) Filters

400MHz Band SAW Filters for Low Power Radio Communications

SF3535B426M54B800A00/ SF3535B429M55B800A00/ SF7050B469M18B01MA00/ SF3838B426M07C080A00/ SF3838B429M17C080A00/ SF3838B440M20B400A00



Pb Free

RoHS Compliant

Features

- RF filter for transmitter and receiver
- For low power radio communications
- Miniature size and light weight

Standard Frequency

- 426.54MHz
- 429.55MHz
- 440.2MHz
- 469.1875MHz

How to Order

SF 3535 B 426M54 B 800 A00
① ② ③ ④ ⑤ ⑥ ⑦

- ① Type of Product (SAW Filter)
- ② Package Size (3.5×3.5mm)
- ③ Sealing Type (Seam Weld Type)
- ④ Nominal Frequency (426.54MHz)
- ⑤ Material (Li₂B₄O₇)
- ⑥ Pass Bandwidth (800kHz)
- ⑦ Customer Special Model Suffix (STD)

Standard Frequency

Nominal Frequency (MHz)	New Part Number	Old Part Number	Remarks
426.54	SF3535B426M54B800A00	LSFB44-426-800K0	Midle Band Width
	SF3838B426M07C080A00	MSFB19-426-080K0	Ultra Narrow Band Width
429.55	SF3535B429M55B800A00	LSFB44-429-800K0	Midle Band Width
	SF3838B429M17C080A00	MSFB19-429-080K0	Ultra Narrow Band Width
440.2	SF3838B440M20B400A00	LSFB19-440-440K0	—
469.1875	SF7050B469M18B01MA00	LSFB20-469-001M0	—

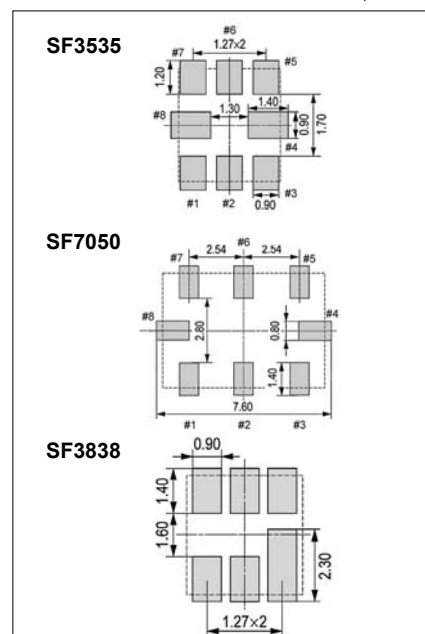
Specifications (Example)

Item	Unit	Conditions	SF3535B426M54B800A00 Specifications	
Nominal Frequency (Fo)	MHz	—	426.54	
Operating Temperature Range	°C	-10 to +60	—	
Storage Temperature Range	°C	-30 to +70	—	
Ripple	dB	Fo±400kHz	0.4*	1.5 MAX.
Insertion Loss	dB	Fo±400kHz	2.8*	3.5 MAX.
Guaranteed Attenuation	dB	(F-21.4)±400kHz	60*	50 MIN.
Terminating Impedance	Ω	—	50 Typical	

* : Typ.

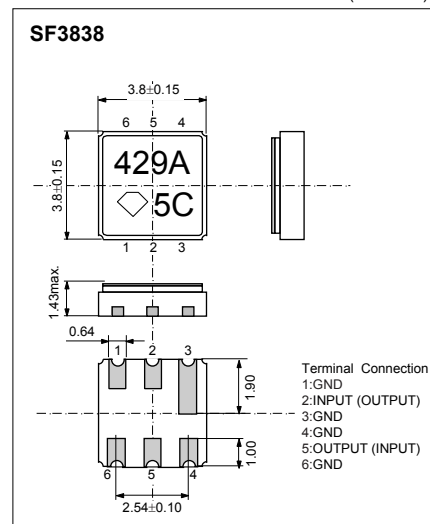
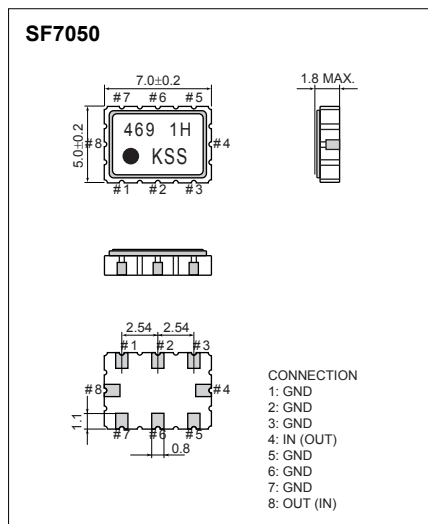
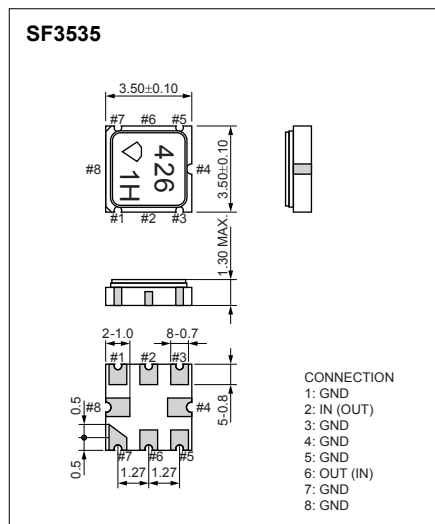
Recommended Land Pattern

(Unit : mm)



Dimensions

(Unit : mm)





Surface Acoustic Wave (SAW) Filters

200MHz Band SAW Filters for PHS

SF3535B243M95B220A00



Pb Free

RoHS Compliant

Features

- IF filter for PHS
- Miniature size and light weight

Standard Frequency

- 243.95MHz

How to Order

SF 3535 B 243M95 B 220 A00
① ② ③ ④ ⑤ ⑥ ⑦

- ① Type of Product (SAW Filter)
- ② Package Size (3.5×3.5mm)
- ③ Sealing Type (Seam Weld Type)
- ④ Nominal Frequency (243.95MHz)
- ⑤ Material ($\text{Li}_2\text{B}_4\text{O}_7$)
- ⑥ Pass Bandwidth (220kHz)
- ⑦ Customer Special Model Suffix (STD)

New Part Number	Old Part Number
SF5353B243M95B220A00	LSFB44-243-220K0

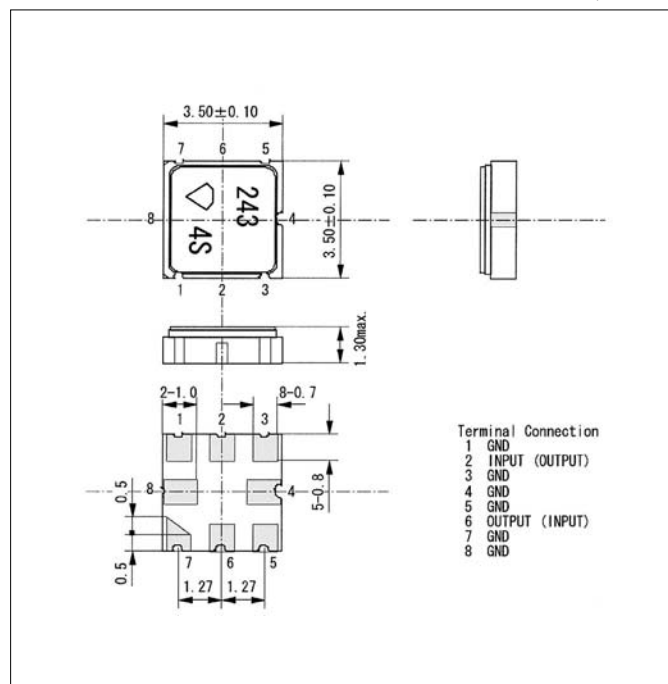
Specifications

Item	Unit	Conditions	Specifications	
Nominal Frequency (Fo)	MHz	—	243.95	
Operating Temperature Range	°C	-10 to +60	—	
Storage Temperature Range	°C	-35 to +85	—	
Ripple	dB	Fo±110kHz	0.5*	1.5 MAX.
Insertion Loss	dB	Minimum Loss	2.7*	5 MAX.
Guaranteed Attenuation	dB	Fo±0.6MHz	-0.6/40*	25 MIN.
			+0.6/35*	
		Fo±1.2MHz	-1.2/45*	40 MIN.
			+1.2/42*	
Group Delay Deviation	μsec	Fo-21.6MHz	70*	60 MIN.
		Fo±110kHz	0.4*	1.2 MAX.

* : Typ.

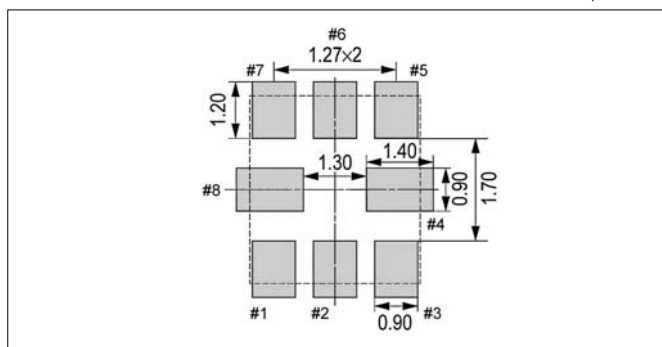
Dimensions

(Unit : mm)

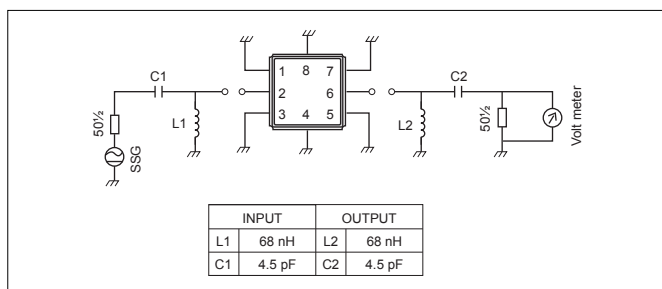


Recommended Land Pattern

(Unit : mm)



Test Circuit

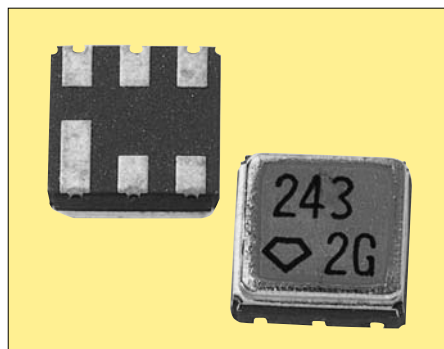




Surface Acoustic Wave (SAW) Filters

200MHz Band SAW Filters for PHS

SF3838B243M95B220A00/ SF3838B248M45B220A00



Pb Free

RoHS Compliant

Features

- IF filter for PHS
- Miniature size and light weight

Standard Frequency

- 243.95MHz
- 248.45MHz

How to Order

SF 3838 B 243M95 B 220 A00
① ② ③ ④ ⑤ ⑥ ⑦

- ① Type of Product (SAW Filter)
- ② Package Size (3.8×3.8mm)
- ③ Sealing Type (Seam Weld Type)
- ④ Nominal Frequency (243.95MHz)
- ⑤ Material (Li₂B₄O₇)
- ⑥ Pass Bandwidth (220kHz)
- ⑦ Customer Special Model Suffix (STD)

New Part Number	Old Part Number
SF3838B243M95B220A00	LSFB19-243-220K0
SF3838B248M45B220A00	LSFB19-248-220K0

Specifications

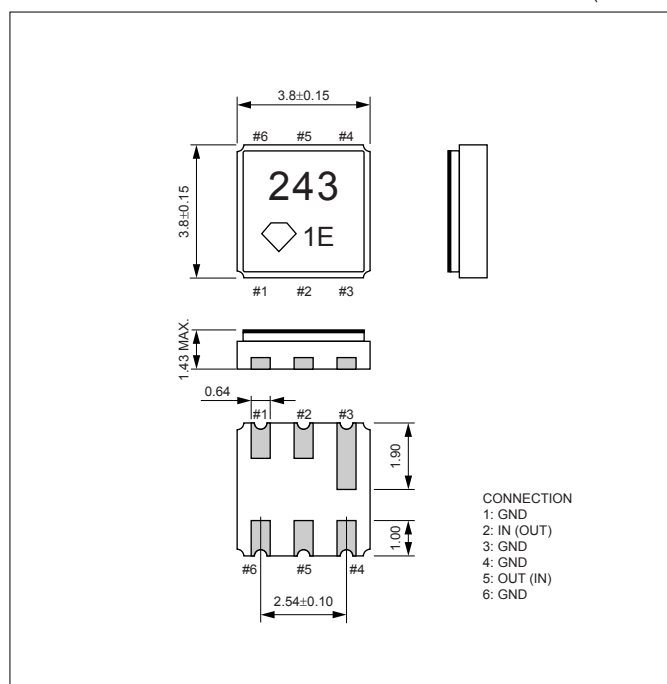
Item	Unit	Conditions	SF3838B243M95B220A00 Specifications		SF3838B248M45B220K0 Specifications	
Nominal Frequency (Fo)	MHz	—	243.95		248.45	
Operating Temperature Range	°C	-10 to +60	—		—	
Storage Temperature Range	°C	-35 to +85	—		—	
Ripple	dB	Fo±110kHz	0.5*	1.5 MAX.	0.5*	1.5 MAX.
Insertion Loss	dB	Minimum Loss	2.6*	5 MAX.	2.6*	5 MAX.
Guaranteed Attenuation	dB	Fo±0.6MHz	-0.6/52*	25 MIN.	-0.6/55*	25 MIN.
			+0.6/34*		+0.6/36*	
		Fo±1.2MHz	-1.2/47*	40 MIN.	-1.2/55*	35 MIN.
			+1.2/43*		+1.2/43*	
		Fo-21.6MHz	70*	60 MIN.	65*	60 MIN.
Group Delay Deviation	μsec	Fo±110kHz	0.5*	1.2 MAX.	0.3*	1.2 MAX.

* : Typ.

* : Typ.

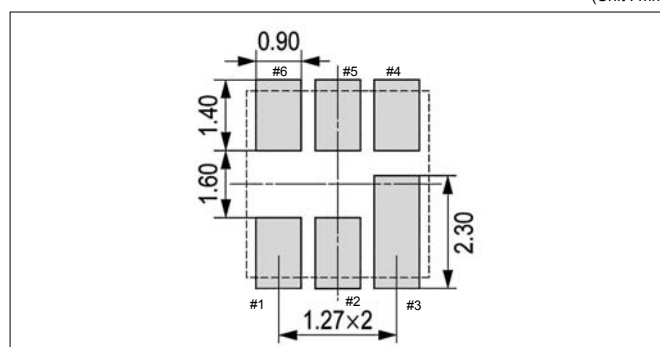
Dimensions

(Unit : mm)

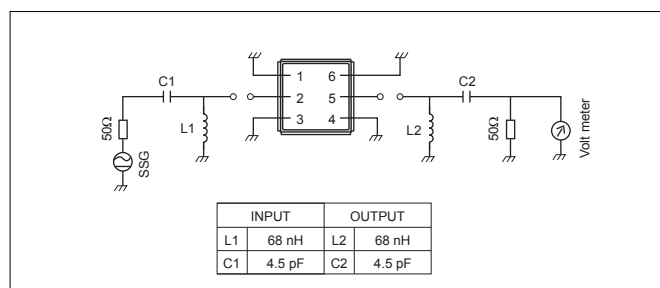


Recommended Land Pattern

(Unit : mm)



Test Circuit





Pb Free

RoHS Compliant

Features

- Small and low profile
- Ceramic package type
- Flat pass band characteristics
- Low insertion loss
- Circuit simplification

Application

- PHS

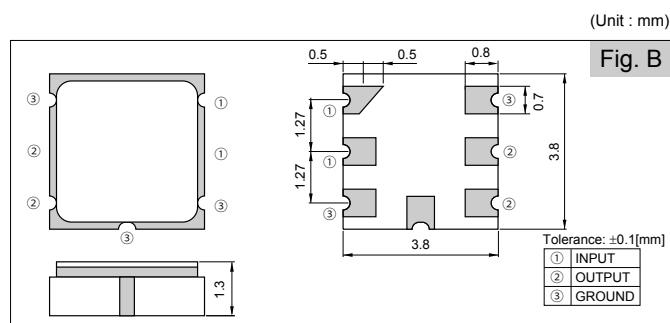
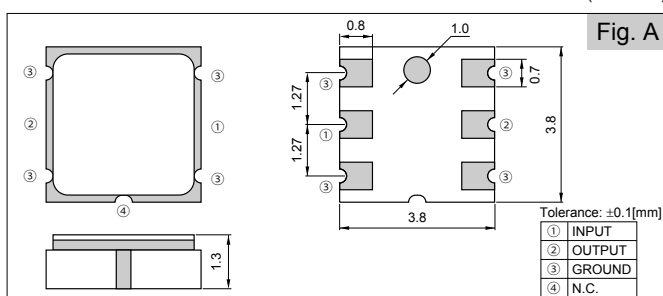
How to Order

PAFC 243 B
① ② ③

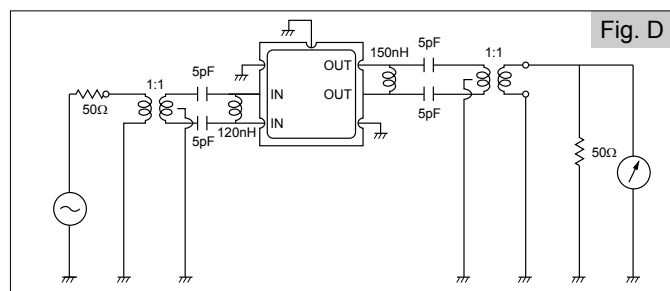
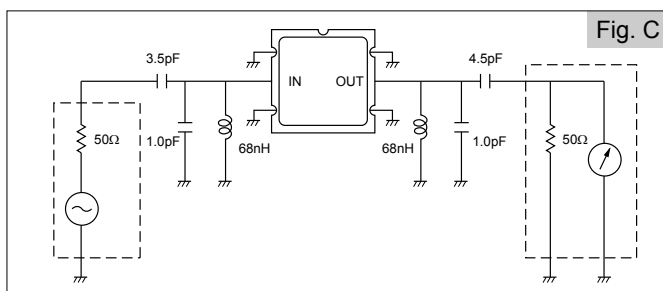
- ① Series
- ② Center Frequency
- ③ Type

Dimensions

(Unit : mm)



Test Circuit



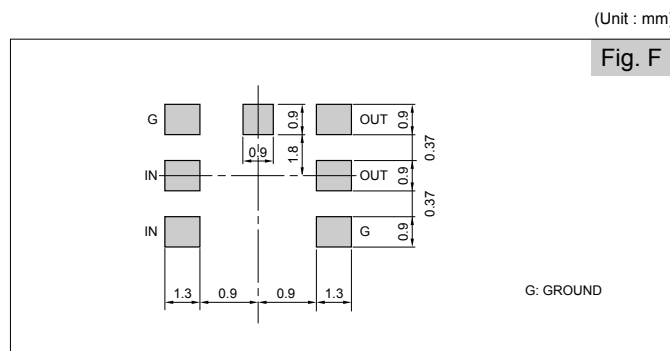
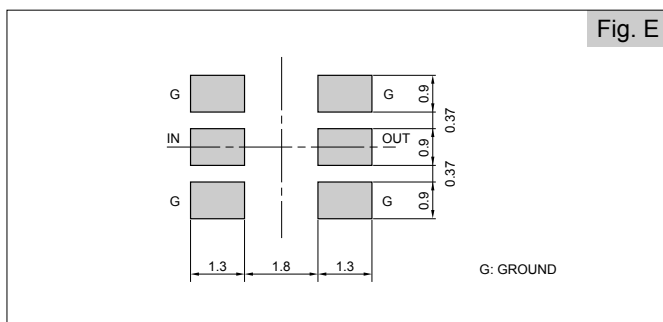
Specifications

Parts No.	Nominal Center Frequency (fn)	Insertion Loss	Pass Band Width (at 3dB)	Stop Band Attenuation			Ripple (fn±110kHz)	Group Delay Time (fn±110kHz)	Operating Temperature	Storage Temperature	Dimensions	Test Circuit	Recommended Land Pattern	Taping Dimensions
				fn±600kHz	fn±1.2MHz	fn±fa MHz(±)								
PAFC243B	243.95MHz	4.0dB max.	±130kHz min.	30dB min.	40dB min.	60dB min.	1.5dB max.	1.2μs max.	-10 to 60°C	-20 to 80°C	Fig. A	Fig. C	Fig. E	Fig. G
PAFC248C	248.45MHz	4.5dB max.	±130kHz min.	30dB min.	35dB min.	60dB min.	1.5dB max.	1.2μs max.	-10 to 60°C	-20 to 80°C	Fig. B	Fig. D	Fig. F	Fig. G

* Note PAFC248C : fa=21.5MHz
PAFC243B : fa=21.6MHz

Recommended Land Pattern

(Unit : mm)

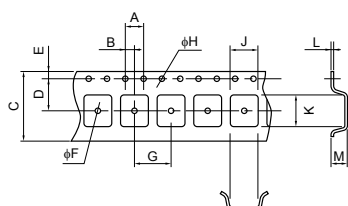




Taping Dimensions

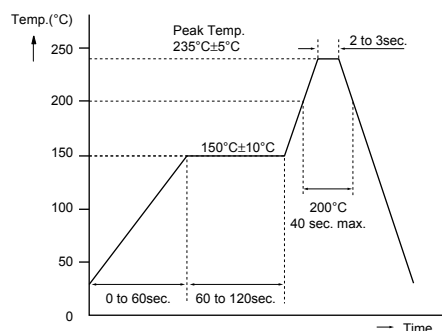
(Unit : mm)

Fig. G



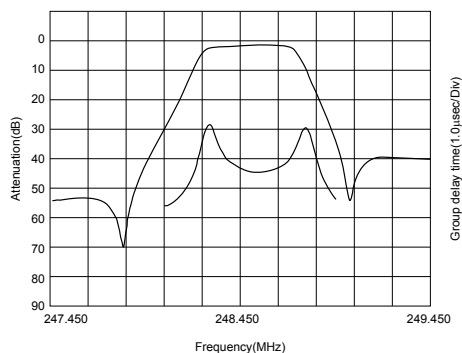
Code	A	B	C	D	E	F	G	H	J	K	L	M
Dimension	4.0	2.0	12.0	5.5	1.75	1.55	8.0	1.55	4.3	4.3	0.3	2.05

Recommended Temperature Profile IR Reflow

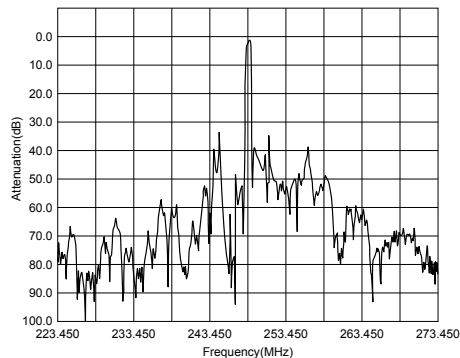


Characteristics

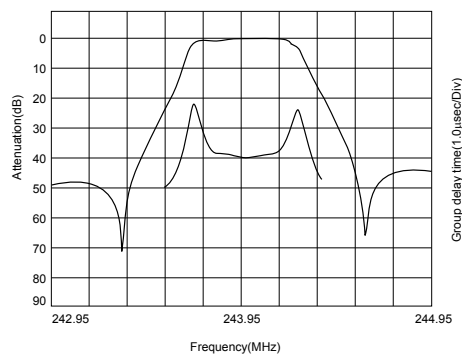
PAFC248C (Pass Band Characteristics)



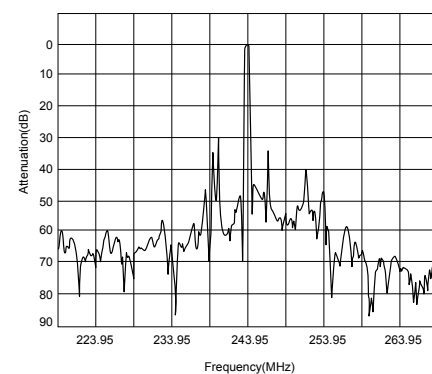
PAFC248C (Spurious Characteristics)



PAFC243B (Pass Band Characteristics)



PAFC243B (Spurious Characteristics)

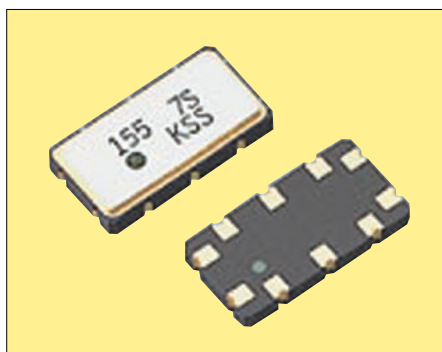




Surface Acoustic Wave (SAW) Filters

IF SAW Filters for Fiber Optic Communications

SF9148B155M52C155A00/ SF9148B622M08C622A00



Pb Free

RoHS Compliant

Features

- For Fiber optic communications
- Miniature size and light weight

Standard Frequency

- 155.520MHz
- 622.080MHz

How to Order

SF 9148 B 155M52 C 155 A00
① ② ③ ④ ⑤ ⑥ ⑦

- ① Type of Product (SAW Filter)
- ② Package Size (9.1×4.8mm)
- ③ Sealing Type (Seam Weld Type)
- ④ Nominal Frequency (155.520MHz)
- ⑤ Material (Quartz Crystal)
- ⑥ Pass Bandwidth (155kHz)
- ⑦ Customer Special Model Suffix (STD)

New Part Number	Old Part Number
SF9148B155M52C155A00	MSFB22-155-155K0
SF9148B622M08C622A00	MSFB22-622-622K0

Specifications

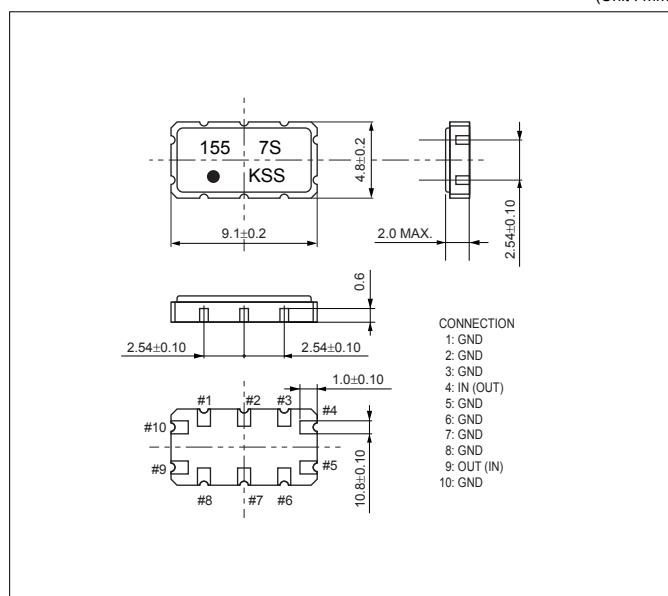
Type		SF9148B155M52C155A00		SF9148B622M08C622A00	
Item	Unit	Conditions	Specifications	Conditions	Specifications
Nominal Frequency	MHz	—	155.52	—	622.08
Operating Temperature Range	°C	-20 to +75	—	-20 to +75	—
Storage Temperature Range	°C	-40 to +85	—	-40 to +85	—
Q Value		600 < Q < 1000 910*		600 < Q < 1000 830*	
Insertion Loss	dB	Minimum Loss	8 MAX.*	Minimum Loss	7.2 MAX.*
Guaranteed Attenuation	dB	DC to 152MHz	30 MIN.	DC to 606MHz	30 MIN.
		159 to 312MHz	30 MIN.	699 to 1245MHz	25 MIN.
Group Delay Deviation	Ω	—	50	—	50

* : Typ.

* : Typ.

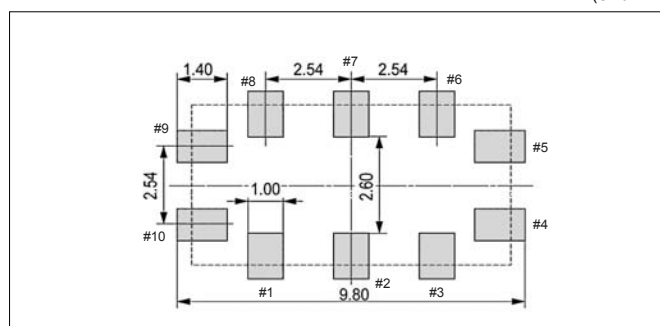
Dimensions

(Unit : mm)



Recommended Land Pattern

(Unit : mm)



Test Circuit

